



CONNECTICUT STATE
DEPARTMENT OF EDUCATION

Summer Science Challenge Ideas Grades K–5

Here is a science challenge for you to achieve during the summer months. Your first task is to find a notebook and write the word **SCIENCE** on the cover. Then see if you can do as many of these fun and challenging events as possible. Use your science notebook to record, draw, list, and figure out some of these activities to explain your thinking. We have included some questions to help you with observing and wondering while writing down answers in your notebook.

1. Identify as many **insects** as you can find, draw them in your science notebook. How are insects different from other living things?
2. Identify as many different **leaves** as you can find, and draw them in your science notebook. Don't forget that pine needles are one type of leaf. How can you sort the leaves (color, size, shape)?
3. Identify as many **birds** as you can see, and draw them in your science notebook. How are birds different from other animals?
4. Build and fly a **paper airplane**. See how far it can fly, or how long it stays in the air. What changes can you make to have your plane stay up longer or fly farther?
5. Find and identify as many **rocks and minerals** as you can find. See if you can start a collection. What can rocks and minerals be used for? Make a list in your notebook.
6. Look up at the **clouds**. Try to identify what type of clouds you see and draw what they look like. Do the clouds look like it's going to start raining? Do this activity for at least three days. What have you noticed?
7. With a rubber band and a cup, make a **musical instrument**, and draw it in your science notebook. When the rubber band is tighter on the cup, how did the sound change? How can you make the sound change?
8. Plant a few **seeds** and watch them grow over several days. Measure the growth each day and record the results in your notebook. Put one plant in the shade and another in the sun. Which one grows the most? Why?
9. Using a stick, make different **drum sounds**. What sounds the best or the loudest?
10. Fill a container of **water** and find items around your house that float or sink. Why do these items float or sink?
11. Identify types of **trees** or different types of **tree bark** and draw them in your science notebook.
12. Find a **spider web** and draw it in your science notebook. Do not disturb the spider if it's in the web. Describe the way a spider catches its food in its web.

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- Using sidewalk chalk, make a **shadow sundial** to tell time. Can you tell the time using the sun? What changes did you have to make on your sundial to find the right time?
- Make and fly a homemade **kite**. Why does your kite fly? How high can you get your kite to fly?
- Push objects down a **slide**. Why do some objects go faster and what can you do to change their speed?
- Find and identify many types of **flowers**. Compare the flowers. How are they different and the same? Draw them in your science notebook.
- Measure the growth of the **grass** each day and write it down in your notebook. Does the amount of sunlight affect the growth?
- Use a cup and a marker and make your own **rain gauge** to collect rainwater. How much rain did you collect?
- Identify as many **seeds** as you can find and draw them in your science notebook. How are the seeds different or the same? How did they get into your yard?
- Use a **flashlight** to shine through several different objects. Identify which objects block the light and which objects let the shine through. Why does this happen?
- Using two cups and some string to make an old-fashioned **telephone**. Talk to a friend who is out of sight. How does this telephone work?
- Cut up a variety of **fruit** and leave some in the shade and some in the sun. Which turns rotten sooner? (Don't eat it!) Is there anything you can do to make the fruit last longer?
- Take out some **ice cubes** and place some in the shade and some in the sun. Which melts faster? What can you do to make the ice cubes last longer before they melt?
- Make a **food waste composter**. At the end of a week, what has happened to the food scraps? Record your findings after two weeks, then after three weeks.
- Using a **rubber ball**, see how high you can get it to bounce. Count how many times it bounces before it stops. Do different types of rubber balls bounce differently?
- How many drops of water can you put onto a **penny**? What causes the drops of water to stay on the penny?
- Dig into **the ground**, identify what you can find, and draw and list it in your notebook. What things did you find that are alive and things that aren't? How did you know they were alive?
- Identify as many **animal noises** that you can hear when you are outside. What animals do you think are making those noises?
- Record the **eye color** of as many people as you can see in one day and make a list in your notebook. What do you think might cause people to have different eye color?
- Fill a clear, empty soda bottle with water and create a **rainbow** from the sun. How many colors can you identify in your rainbow?
- Find a **flower** and slowly take it apart. Draw each part in your notebook. Figure out what each part of the flower does.
- Using some string, dish soap and water, make a solution and create big **bubbles**. How big can you make a bubble?
- Using some string, a napkin, and a weight, create your own **parachute**. Can you make your parachute float to the ground as slowly as possible? How?
- Look through your **recycling bin** at home. Can you make something useful from the items in your recycling bin? Why is it important to be able to reuse some of your recyclables?



Have fun and remember to put your drawings, notes, ideas, and results into your science notebook.

