

# Finley's Fantastic 9-Week Science Adventure!

Welcome, Finley, to an amazing journey through the world of science! Get ready to explore, create, and discover!

## Week 1: Wonderful Weather Watchers

### Focus:

Observing and describing different types of weather and how it changes.

### Materials for this week:

- Paper or a notebook for a weather chart
- Crayons or markers
- Construction paper
- Safety scissors, glue/tape
- A stick or pencil
- An empty jar

### Activities:

1. **Daily Weather Chart:** Each day, look outside and draw what the weather is like (sunny, cloudy, rainy, windy, snowy). You can create symbols for each!
2. **Pinwheel Power:** Make a simple pinwheel from paper. Take it outside on a windy day. What happens? How does the wind make it move?
3. **What to Wear Today?:** Talk about different types of weather. What clothes would you wear if it's sunny and hot? What if it's cold and rainy? You can draw outfits for different weather!
4. **Cloud Gazing:** Lie down outside and look at the clouds. What shapes do you see? Can you draw your favorite cloud shapes?
5. **Simple Rain Gauge:** Place an empty, straight-sided jar outside when it's raining. How much rainwater does it collect? You can mark the level with a marker.

### Learning Sparks:

Finley will learn to become a keen observer of the weather, describe different weather conditions using new vocabulary, and understand that weather changes.

---

## Week 2: Plant Power!

### Focus:

Discovering what plants need to grow and learning about the different parts of a plant.

### Materials for this week:

- A bean seed (lima beans work well)
  - A clear plastic cup or small jar
  - Paper towels
  - Water
-

- Magnifying glass
- Crayons, paper
- Various leaves, flowers (from a nature walk, with permission)
- Optional: different edible plant parts (e.g., carrot for root, celery for stem, spinach for leaf, broccoli for flower, apple for fruit, sunflower seeds for seeds)

### Activities:

1. **Seed Sprouter:** Line a clear cup with a damp paper towel. Place a bean seed between the paper towel and the side of the cup so you can see it. Add a little water to keep the towel moist. Watch it for a few days. What happens? Draw your growing seed!
2. **Nature Walk & Plant Parts:** Go on a nature walk. Collect different leaves, twigs, and (if allowed) flowers. Use a magnifying glass to look closely. Can you find the stem, leaves, and maybe even roots or flowers? Talk about what each part does.
3. **Feed the Plant Drawing:** Draw a big, beautiful plant. Then, draw all the things it needs to grow strong: sunshine, water, and good soil.
4. **Leaf Rubbings:** Place a leaf under a piece of paper. Gently rub the side of a crayon over the paper. The leaf's pattern will appear!
5. **Eat Your Plants!:** (Optional, with adult help) Explore different edible plant parts. Talk about which part of the plant you are eating (e.g., carrots are roots, lettuce is leaves).

### Learning Sparks:

Finley will understand that plants are living things with specific needs (sunlight, water, soil) and be able to identify basic parts of a plant (roots, stem, leaves, flower).

---

## Week 3: Amazing Animals Around Us

### Focus:

Learning about different kinds of animals, where they live (habitats), and what they need to survive.

### Materials for this week:

- Animal pictures or small animal toys
- A shoebox or small cardboard box
- Craft supplies (construction paper, glue, scissors, markers, natural materials like twigs, leaves, cotton balls)
- Paper, crayons

### Activities:

1. **Animal Sorting:** Gather animal pictures or toys. Can you sort them into groups? Maybe by where they live (farm, jungle, ocean, forest) or what they eat?
  2. **Build a Habitat:** Choose a favorite toy animal. Use a shoebox and craft supplies to build a cozy habitat (home) for it. Think about what your animal needs in its home.
  3. **Animal Charades:** Take turns acting like different animals – make their sounds and move like them. Can the other person guess the animal?
  4. **Animal Diary:** Pick an animal you like. Draw a picture of it and try to find out one fun fact about it (e.g., what it eats, where it sleeps).
  5. **Fingerprint Animals:** Dip your finger in paint or an ink pad and make fingerprints on paper. Turn these prints into fun animals by adding legs, ears, and tails with a marker!
-

## Learning Sparks:

Finley will learn that there are many different kinds of animals, each with unique characteristics and needs, and that animals live in environments suited to them (habitats).

---

## Week 4: My Sensational Senses

### Focus:

Exploring our five senses – sight, hearing, smell, taste, and touch – and how they help us learn about the world.

### Materials for this week:

- A blindfold (optional)
- Various small objects for a 'feely bag' (e.g., cotton ball, key, block, spoon)
- Small containers with different 'smells' (e.g., cinnamon, lemon slice, vanilla on a cotton ball - with adult supervision)
- Safe foods for tasting (e.g., a tiny bit of sugar for sweet, lemon juice for sour, pretzel for salty)
- Paper, crayons
- Things that make different sounds (bell, whistle, clapping hands)

### Activities:

1. **Feely Bag Fun:** Put different small objects into a bag. Without looking (maybe use a blindfold!), reach in and try to guess what each object is just by feeling it.
2. **Sound Detective:** Close your eyes. Ask someone to make different sounds (e.g., clapping, snapping fingers, jingling keys). Can you guess what made the sound?
3. **Smell Test:** (With adult help) Carefully smell different items in small containers. Can you guess what they are? Which smells do you like?
4. **Taste Time:** (With adult help and tiny amounts) Try tasting things that are sweet, sour, and salty. How does your tongue tell the difference? Draw faces for each taste!
5. **'I Spy' Senses Walk:** Go for a walk (indoors or outdoors) and use all your senses. What do you see? What do you hear? What can you smell? What do things feel like? (Be careful what you touch and never taste unknown things outside). Make a drawing of something interesting you discovered with your senses.

## Learning Sparks:

Finley will be able to name the five senses and describe how each one helps us gather information about our surroundings, making learning an interactive experience.

---

## Week 5: Marvelous Matter: Sink or Float?

### Focus:

Investigating why some objects sink in water and others float.

### Materials for this week:

- A large tub or basin of water
-

- Various small, waterproof objects (e.g., leaf, small rock, crayon, plastic toy boat, coin, sponge, piece of wood, apple slice, plastic bottle cap)
- Paper or whiteboard to make a chart (columns for 'Object', 'Prediction: Sink or Float?', 'Result: Sink or Float?')
- Towels for spills!
- Modeling clay (optional)

### Activities:

1. **Prediction Power:** Gather your objects. For each one, predict: Will it sink or will it float when you put it in the water? You can make a chart to write down or draw your predictions.
2. **Sink or Float Test:** Carefully place each object into the tub of water, one at a time. What happens? Was your prediction correct? Sort the objects into a 'sink' pile and a 'float' pile.
3. **Why, Oh Why?:** Talk about the objects that floated. What do they feel like? (Maybe light, or hollow). What about the ones that sank? (Maybe heavy, or solid).
4. **Floating Challenge:** Can you take something that sinks (like a small ball of modeling clay) and change its shape to make it float? (Hint: Think about the shape of a boat!).
5. **Build a Boat:** Use materials like foil, small plastic containers, or craft sticks to try and build a little boat. Test if it floats! Can it carry a small 'passenger' (like a coin or a small toy)?

### Learning Sparks:

Finley will develop skills in prediction and observation, and begin to understand that an object's ability to sink or float depends on its properties (like how heavy it is for its size, or if it has air trapped inside).

## Week 6: Magnificent Magnets

### Focus:

Exploring what magnets are, what they stick to, and how they can push and pull.

### Materials for this week:

- Various magnets (e.g., bar magnet, horseshoe magnet, wand magnet, refrigerator magnet)
- A tray of different small objects: some metal (paper clips, coins, screws, keys) and some non-metal (plastic toys, wooden blocks, rubber bands, pieces of paper, aluminum foil)
- Paper, crayons
- String, paper clips, construction paper (for fishing game)

### Activities:

1. **Magnetic Hunt:** Go on a hunt around the house or classroom with a magnet. What things does the magnet stick to? What things does it not stick to? Make a list or draw pictures.
2. **Attraction Action:** Spread your tray of objects. Test each one with a magnet. Sort them into two piles: 'Magnetic' (sticks to the magnet) and 'Not Magnetic'. What do the magnetic things have in common? (Usually metal, but not all metals!)
3. **Magnetic Fishing:** Cut out fish shapes from paper and attach a paper clip to each one. Tie a magnet to a piece of string on a stick (like a fishing rod). Go 'fishing' for your paper clip fish!
4. **Push and Pull:** If you have two magnets, try bringing them close together in different ways. Do they always stick? Sometimes they might push each other away (repel)!
5. **Magnetic Maze:** Draw a simple maze on a piece of paper. Place a paper clip at the start of the maze. Can you use a magnet underneath the paper to guide the paper clip through the maze?

## Learning Sparks:

Finley will discover that magnets attract certain types of materials (especially iron and steel), can work through some materials, and have poles that can attract or repel other magnets.

---

## Week 7: Super Sound Explorers

### Focus:

Investigating how sounds are made and learning that sound comes from vibrations.

### Materials for this week:

- Rubber bands
- An empty box or container (like a tissue box or plastic tub)
- An empty plastic bottle with a lid, and some rice or dried beans
- A pot and a wooden spoon
- Your own voice and hands!
- A slinky (optional)
- Paper and crayons

### Activities:

1. **Rubber Band Guitar:** Stretch a few rubber bands with different thicknesses around an open box. Pluck the rubber bands. What do you hear? Can you see them moving (vibrating)? Do different rubber bands make different sounds?
2. **Make a Shaker:** Put some rice or dried beans into an empty plastic bottle and secure the lid. Shake it! What do you hear? What's making the sound?
3. **Drum Time:** Use a pot and a wooden spoon as a simple drum. Tap it gently, then tap it harder. How does the sound change?
4. **Feel the Vibes:** Hum a tune and gently place your fingers on your throat. What do you feel? That's vibration! You can also carefully touch a speaker when music is playing (with adult permission) to feel the vibrations.
5. **Sound Hunt:** Walk around and listen for different sounds. Try to make your own sounds using everyday objects (e.g., crinkling paper, tapping a glass gently with a spoon - with care!). Draw pictures of things that make interesting sounds.

## Learning Sparks:

Finley will learn that sound is created by vibrations, and that different objects can make different sounds (loud/soft, high/low) by vibrating in different ways.

---

## Week 8: Light & Shadow Play

### Focus:

Exploring where light comes from and how shadows are made.

### Materials for this week:

- A flashlight
-

- A darkened room (or a way to make part of a room darker)
- Your hands!
- Various solid objects (e.g., toys, blocks, books)
- White paper or a light-colored wall
- Outdoor space on a sunny day (optional)
- Chalk (if doing outdoor shadows)
- Colored cellophane or tissue paper, clear contact paper or wax paper, scissors (for stained glass)

### Activities:

1. **Light Source Safari:** Go on a hunt for things that make light! (Examples: sun, lamp, flashlight, phone screen). These are called light sources.
2. **Shadow Puppet Show:** In a darkened room, shine a flashlight onto a wall. Use your hands between the light and the wall to make shadow animals! Can you make a dog? A bird? A rabbit?
3. **Shadow Tracing:** Place an object (like a toy animal) on a piece of paper. Shine the flashlight on it to make a shadow. Trace the outline of the shadow. Now move the flashlight. How does the shadow change? If it's a sunny day, you can do this outside with chalk on the pavement, tracing the shadow of a toy or even Finley!
4. **Blocking the Light:** Explore how different objects block light. Hold up a book in front of the flashlight – it makes a dark shadow (it's opaque). Hold up a piece of clear plastic – light goes through (it's transparent). What about thin paper (translucent)?
5. **Rainbow Window Art:** Cut shapes from colored cellophane or tissue paper. Arrange them on a piece of clear contact paper or wax paper. Cover with another piece if using contact paper. Tape it to a window. How does the light shine through the colors?

### Learning Sparks:

Finley will understand that light comes from sources, that shadows are formed when an object blocks light, and that shadows can change shape and size.

## Week 9: Earth's Treasures: Rocks & Soil

### Focus:

Observing and describing different types of rocks and soil and their properties.

### Materials for this week:

- A collection of different rocks (from a nature walk or a collection)
- A magnifying glass
- Paper and crayons/markers
- A small tub or tray
- Different types of soil if possible (e.g., potting soil, sand, clay soil from the garden – with permission)
- Water
- Optional: Googly eyes, glue, yarn for pet rocks
- For fun 'dirt cups': Chocolate pudding, crushed chocolate cookies, gummy worms

### Activities:

1. **Rock Hunt & Sort:** Go on a rock hunt in your yard or a park (with permission). Collect a few different rocks. Wash them if they are dirty.

2. **Rock Detective:** Use a magnifying glass to look closely at your rocks. What colors do you see? Are they smooth or rough? Do they have shiny bits or layers? Draw your favorite rock and its special features. Try sorting your rocks by size, color, or texture.
3. **Pet Rock Pal:** Choose one special rock. Give it a name! You can decorate it with googly eyes, yarn for hair, or paint to make it your very own pet rock.
4. **Soil Exploration:** (This can get a bit messy – good for outdoors or with a tray!) Look at different types of soil. How does potting soil feel compared to sand? Add a little water to each. What happens? Which soil do you think plants would like best?
5. **Creative Dirt Play:** Make mud pies outside (if allowed!) or create a 'dirt cup' dessert: layer chocolate pudding (mud) with crushed chocolate cookies (dirt) and add some gummy worms!

### Learning Sparks:

Finley will learn to observe and describe the physical properties of rocks (size, shape, color, texture) and soil, and understand that these are important parts of our Earth.

---

Great job, Finley! You're a super scientist! Keep asking questions and exploring the world around you!