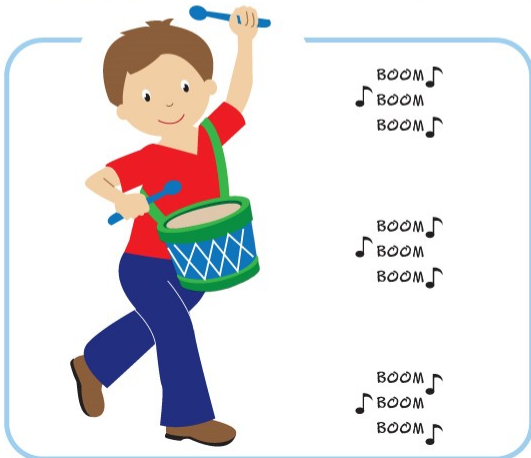


School-Age Fun

Let's Explore Patterns Unit












School-Age Fun Booklet

The experiences included in this booklet are designed for children in the KG to 3rd grade age group. These activities are not just fun, they are educational as well. Be sure to adapt and modify for your individual children as needed.

Below you will see a box that contains the developmental areas the experiences included in this booklet address and the associated picture codes. When you read the activity plans, just look for these codes. They will tell you what developmental areas you are addressing as you do each experience. This makes documentation super easy and enables you to make sure you are addressing all developmental areas for all developmental levels on a consistent basis. Please see our User's Guide for more information on the 10 developmental areas and the 40 Gee Whiz Learning Indicators.

Following this page, you will find hands-on experiences for your school-age/afterschool children. **Items in red may need a little more time to prep or gather.** We hope you find them super easy to follow and a lot of fun! Please, feel free to reach out to us at customerservice@geewhizeducation.com if you have any questions.

Gee Whiz Developmental Areas & Learning Indicators

	Language Development (LD1, LD2, LD3, LD4)
	Literacy Knowledge (LK1, LK2, LK3, LK4, LK5)
	Math Knowledge (MK1, MK2, MK3, MK4, MK5, MK6)
	Science Knowledge (SK1, SK2, SK3)
	Approaches to Learning (AL1, AL2, AL3)
	Logic & Reasoning (LR1, LR2)
	Social Studies Knowledge (SS1, SS2, SS3, SS4)
	and Creative Arts & Music (CA1, CA2, CA3, CA4)
	Social & Emotional Development (SE1, SE2, SE3, SE4)
	Physical Development & Health (PD1, PD2, PD3, PD4, PD5)



This symbol indicates the experience addresses character education.



This symbol indicates the experience helps children build gross motor skills.



This symbol indicates the experience can, or should, be done outdoors.



Let's Explore Patterns

Focus: Patterns in Nature

Finding Fractals

(Developmental Areas:       )

Materials:

- Unbreakable magnifiers**
- Notebooks, pencils/colored pencils/markers
- Access to a computer or tablet
- OPTIONAL: Cellphone or digital camera

- Fractals in nature is a pattern that repeats itself. A good example is a fern. During this experience, the children will have the opportunity to learn what a fractal is and then use their keen observation skills to find some in your outdoor play space. Just like real scientists, the children will document their discoveries using writing and drawing (or photos).
- What exactly is a fractal and where might you find one in nature? To help the children build background knowledge, show them a short video, such as this one: <https://www.youtube.com/watch?v=dZM45mfJQ40>.
- After watching the video, talk with the children about fractals in nature they think they might find in your outdoor play space. Then, head outside and take unbreakable magnifiers, notebooks and pencils/colored pencils. If desired, you may also want to take a cellphone or digital camera the children can use to document the fractals they discover.
- As the children look for fractals, watch and listen from a distance. This will help you evaluate the children on many different skills. You may also want to record an anecdotal note about each child as they explore.
- Once the children finish discovering and documenting fractals, invite them to share those discoveries with the group. This is a very meaningful way to help children develop oral presentation skills in a low-key, fun way.
- **EXTENSION:** Invite the children to take the notebooks home with them so they can document fractals they find in their own backyards or even at a local park. Then, they can bring their notebooks in to share their discoveries with others.

Questions to Spur Thinking

- *What do you think a fractal is?*
- *What did you learn by watching the video?*
- *What types of fractals do you think you might find in our outdoor play space? What types do you think you might find at home? At the park?*

Questions to Spur Thinking

- *What patterns do you see on the pine cone?*
- *Do you think a pine cone is a fractal? Why do you think that?*
- *Tell me about your pine cone creation.*

Creating with Pine Cones

(Developmental Areas:        )

Materials:

- Larger-sized pine cones** (gather ahead of time OR purchase from your local craft store - 1 per child)
- Assorted art/collage materials (e.g., sequins, beads, ribbon, art tissue, paint (assorted colors), pom-pom balls, etc.)
- Glue
- Large paper plates
- Creating 3-dimensional art is a wonderful experience for older children. Not only is it a different medium than 2-dimensional art, it also requires the use of fine motor control in many different ways. As children choose to participate in this experience, they will also have the opportunity to explore patterns and fractals in nature. If you do not have large pine cones, many craft stores sell them AND you can also ask parents/guardians and/or friends/neighbors to help you gather some.
- Set out all the materials noted above as well as any others you believe the children may enjoy using for this experience. If you give each child a large paper plate as his/her "work area," this should make clean up a lot easier.
- Before the children begin creating, encourage them to talk about the patterns/fractals they see on their pine cones. If you have ELL/DLL children in your group, encourage them to use both their home language and English to describe the pine cones. The children can also talk about where they may have seen pine cones in their neighborhood or community.
- Next, invite the children to use the materials freely to decorate their pine cones. Be sure to ask plenty of open-ended questions but remember not to "lead" this experience. It should remain open-ended.
- **EXTENSION:** Because the children will be using glue and many different materials, they may need to allow one layer of art/collage materials to dry before adding another.

Let's Explore Patterns

Focus: Patterns in Words



Get Moving!

Word Pattern Hop

(Developmental Areas:)

Materials:

- Index cards, markers & blue painter's tape OR sidewalk chalk**

- School-age children are developmentally ready to explore patterns in yet another place ... words. This experience is going to help the children see patterns between rhyming words. You will get the children started but then they will take the reins for this experience. If you are doing this activity indoors, use index cards, markers & blue painter's tape. If you plan to do this experience outdoors, use sidewalk chalk.
- To get started, print several words that rhyme on individual index cards (indoors) or with sidewalk chalk (outdoors). An example might be: cat, hat, rat, sat, pat. If using index cards, tape these to the floor in a path. Space the cards apart so the children will need to hop from one to another. Do the same if using sidewalk chalk outside as you write the words. As children become curious, see if they can read the words on the path. What do they notice about the words? Do they see any patterns? Then, have the children hop from word to word as they read them out loud.
- Provide the children with more index cards, tape & markers OR sidewalk chalk and challenge them to come up with their own paths of rhyming words with patterns. How many different paths can they create?
- **EXTENSION:** There are so many different sets of rhyming words that the children can certainly create many different paths over the next few days.

Questions to Spur Thinking

- *What do you notice that is the same about all of the words?*
- *Why do you think that rhyming words have a similar letter pattern?*
- *What other words can you think of that rhyme with cat?*
- *If you were going to make a new path of rhyming words, what words would you include?*
- *How can you tell when words rhyme?*

Questions to Spur Thinking

- *What is Morse code?*
- *Who do you think might use Morse code?*
- *When might someone need to use Morse code?*
- *Tell me about the Morse code message you created.*

Morse Code Patterns

(Developmental Areas:)

Materials:

- Morse code chart (print a copy for each child - use Google Images to help you)**
- Plastic spoons**
- White paper, crayons/markers/pencils

- Morse code is a form of communication that uses dots and dashes to transmit information. Each Morse code symbol corresponds to a letter in the alphabet. If you would like to learn more about Morse code, here is some helpful information: https://en.wikipedia.org/wiki/Morse_code. As the children participate in this experience, they will build background knowledge about a different form of communication, practice persistence and engage with others in a different way.
- Because the concept of Morse code is probably going to be new to most children, start with a short video to help them build background knowledge. Here is one option: <https://www.youtube.com/watch?v=N-KcLgXQVa4>
- After watching the video, encourage the children to share what they learned. Why is Morse code important? Who might use Morse code and when?
- Next, show the children the printouts of the Morse code chart. Invite them to look at the patterns of dots and dashes that correspond to each letter of the alphabet. Practice making a few with the children by tapping on a table with a plastic spoon.
- Then, invite the children to practice creating messages using Morse code. First, they will write a short sentence using letters. Then, directly below what they write, they will write the message using Morse code. They can even practice tapping out the message using a plastic spoon.
- **EXTENSION:** Set up a Morse code station where the children can create Morse code messages for their friends to tap out and "translate" into letters. Be sure to keep this station open for as long as the children show interest.

Invite the children to use these pattern strips in any way they would like.

