

SPRING



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Spring

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We hope you enjoy...

Spring and other similar stories were written by Head Start parents, family advocates and teachers as part of the Readiness through Integrative Science and Engineering (RISE) project's Home-School Collaboration (HSC), which represents a core component of the project at Tufts University. HSC in RISE highlights the importance of families' contributions to their children's learning, the value of a school curriculum that reflects children's existing knowledge and prior experience, and the importance of respectful, trusting, and non-hierarchical relationships between parents and teachers.

These stories allow us to find numerous science, technology, and engineering (STE) connections in children's daily lives, drawn from their familiar experiences within their families and in their communities. Each story can be used as a "good start activity." Good start activities are called such, because they lead to a set of learning experiences that encourage children to use science and engineering practices to deepen and extend their understanding of a science or engineering concept as they engage with it over time. By reading these stories with children, you share cultural experiences within the classroom, children's different languages, and make connections between the STE experiences in children's school and home lives.

At the end of each story, you will find ideas for creating learning experiences that will engage young children in the STE that is part of their everyday lives. Beginning with BIG Ideas related to the stories, we provide descriptions of learning experiences that deepen, connect and extend the STE ideas explored in each book. These suggestions are meant as a jumping off point. We hope you'll be inspired to develop your own STE and HSC learning opportunities!

Spring is coming.

Everything is growing now. See! Trees put on their green coats. The grass pushes aside the soil secretly. They come out from the soil and play with trees. Trees and grass sway their leaves with gentle breeze. They like the spring day.

Birds just come back from the warmer south. They left the freezing north last winter. They cannot stay there in winter. It is too cold for birds. Birds sing their songs. They need to find their friends again.

Oh birds, don't forget to build nests for your babies. Spring is a very busy time for birds.

春天来了。

万物都在生长。看呐！树儿穿上了绿色的外套，草儿悄悄地推开了土壤，它们从土地中钻出来和树儿一起玩耍。树儿和草儿随着微风摆动着叶子。它们都很喜欢春天。

鸟儿从更温暖的南方飞回来了。它们在上一个寒冷的冬天离开。鸟儿不能在冬天待在这里，这儿对于它们来说太冷了。鸟儿们唱着歌，它们需要再找到它们的朋友们。哦！别忘了给宝贝们筑起鸟巢。春天对于鸟儿来说来说是非常忙碌的。



Alonso Barbosa and Ying Ying Liu live on the same street. They go to the same preschool. They are good friends. Mrs. Barbosa asks Mrs. Liu to take care of her son, Alonso, when she goes to work sometimes.

Alonso likes blue. He hopes everything is blue. Ying Ying likes pink. She also wishes everything is pink. They will play in Ying Ying's home most of the time.

Alonso Barbosa 和 Ying Ying Liu 住在同一条街上。他们在同一所幼儿园上学，他们是好朋友。在 Mrs. Barbosa 去上班的时候，她请 Mrs. Liu 照顾她的儿子 Alonso。

Alonso 喜欢蓝色，他希望一切都是蓝色的。Ying Ying 喜欢粉色，她也希望一些都是粉色的。多数时候，他们一起在 Ying Ying 家里玩。

Alonso stays with Ying Ying after school today. They play with Legos in the yard. Birds sing songs on the trees.

Alonso asks: "Ying Ying, do you think the birds have different sounds?"
Ying Ying says: "Yes, they sing their own songs. They are different birds."
"How do you know?" Alonso asks with distrust.

Alonso 在放学之后和 Ying Ying 待在一起。他们一起在院子里玩乐高。
鸟儿在树上歌唱。

Alonso问：“Ying Ying，你觉得鸟儿的的声音是不同的么？”

Ying Ying 说：

“是的，它们唱着自已的歌，它们不是同一种的鸟儿。”

“你怎么知道的？”Alonso 怀疑地问道。



Ying Ying brings Alonso under the tree and says: "Can you see some birds on the trees? They are different colors."

Alonso looks up at the tree. Oh yes, he sees the yellow and red birds under the leaves.

Ying Ying 把 Alonso 带到树下，她说：“你能看到树上的鸟儿么？它们有不同的颜色。”

Alonso 抬头看着树。哦是的！他看见了树叶下黄色和红色的鸟儿。



Ying Ying says: "I have a telescope. It makes the bird look bigger, so I can see the bird clearly." Alonso says eagerly: "Can you lend me the telescope? I want to see the bird, please!" Ying Ying says: "Yes, can you wait for me? I will go home to get the telescope." Alonso nods and says: "Hurry, hurry!" He wants to see the birds now.

"I wonder what the birds look like," Alonso thinks.

Ying Ying 说：“我有一个望远镜，它能让鸟儿看起来更大一些，这样我就能看得更清楚了。”

“Alonso 期待地说：“你能把望远镜借给我么？我想看看鸟儿，拜托了！”

Ying Ying 说：“可以，你可以等我一下么？我回家拿望远镜。”

Alonso 点头说道：“快一点，快一点！”他现在就想看到鸟儿。

“我想知道鸟儿长什么样。”Alonso 想。



Mrs. Liu puts two cups of juice on the table and asks: "Alonso, what are you seeing?" "A bird! It is wearing a yellow shirt. It is beautiful," Alonso says excitedly. Mrs. Liu says: "Its name is yellow-breasted chat. The male birds sing songs on the trees in the spring time. They like to hide themselves in other seasons."

Mrs. Liu 把两瓶果汁放在桌子上，问道：“Alonso，你在看什么呀？”
“一只鸟！它穿着黄色的衬衫。它真美！”Alonso 兴奋地说。
刘女士说：“它的名字叫黄胸巨莺。雄鸟春天的时候在树梢上唱歌。
在其他的季节，它们喜欢藏起来。”



"Mrs. Liu, I see a red-haired bird. It is cool," Alonso says excitedly. Mrs. Liu says, "I guess you see a male house finch. It has a streaky brown back, belly, and tail, right?" "Yes! Yes!" Alonso says. Mrs. Liu says: "It is easy to see house finches in the city. They are gregarious birds. Alonso, you may find another house finch in the tree." Alonso moves the telescope. He tries to find another house finch.

Mrs. Liu says: "Alonso, if you like the red haired bird, I'll introduce another red haired bird to you. Let's go to the park."

“刘阿姨，我看见了一只红头发的鸟。它很酷。” Alonso 兴奋地说。

Mrs. Liu 说：“我猜你看到的是一只雄性的家雀。它的后背、肚子和尾巴上有棕色条纹，对么？” “是的！是的！” Alonso 说。

Mrs. Liu 说：“在这个城市里，家雀很常见。它们是群居的鸟类。

Alonso，你或许可以在这颗树上发现另一只家雀。

Alonso 移动了望远镜，他试图寻找另一只家雀。

Mrs. Liu 说：“Alonso，如果你喜欢红头发的鸟，我可以给你介绍另外一种。让我们去公园吧。”



In the park, Mrs. Liu asks: "Ying Ying, would you like to find a pileated woodpecker for Alonso?" Ying Ying moves the telescope and says: "Yes, Mom. It is a big bird. It is easy to find the bird."

Mrs. Liu says: "Yes, it is a big bird with a red crest and black body. It can find carpenter ants inside the tree with its beak. They eat the ants." Alonso asks: "Just like a doctor? It does surgery on trees?" "Yes, Alonso is smart."
Mrs. Liu says smilingly.

在公园里，Mrs. Liu 问：“Ying Ying，你可以给 Alonso 找一只北美黑啄木鸟么？”Ying Ying 移动望远镜，说：“好的，妈妈。这种鸟很大，很容易就能发现。”

Mrs. Liu 说：“是的，这种大鸟头顶有红色的羽冠，身体是黑色的。它可以找到木匠蚁并把它们从树干里挖出来，它们吃蚂蚁。”Alonso 说：“就像医生一样？它给树做手术？”
“是的，Alonso 真聪明。”Mrs. Liu 笑着说。



Where do birds live? Alonso wonders. In the evening, he and his mother will go home. Ying Ying and Mrs. Liu will go home too. What about birds? "Do birds have homes, Mrs. Liu?" Alonso asks. "Birds will hide in the trees. They also build nests to breed their babies."

Alonso asks: "But, where can birds hide if it rains?" He is worried. Ying Ying suggests: "We can build a house for them." Mrs. Liu says: "Some people make houses for birds. You can make a bird house too." Alonso holds Ying Ying's hand and says:

"Let's go home and make a bird house now."

这些鸟儿住在那里呢？Alonso 想。晚上，他和他的妈妈会回家。

Ying Ying 和 Mrs. Liu 也要回家。鸟儿呢？“鸟儿有家么，刘阿姨？”

Alonso 问。“鸟儿会躲在树上。它们建造鸟巢养育它们的孩子。”

Alonso 问：“但是，如果下雨的话，鸟儿可以躲在哪里呢？”他很担忧。

Ying Ying 提议：“我们可以为它们建一个房子。”Mrs. Liu 说：“有些人会为鸟儿建房子，你们也可以给鸟儿建一个房子。”Alonso 拉住 Ying Ying 的手说：“让我们现在回家给鸟儿建一个房子吧！”



Alonso and Ying Ying are making a bird house with Legos in the yard.
They hope that birds can sleep in the house with their baby birds.

Alonso 和 Ying Ying 正在院子里用乐高给鸟儿建房子。
他们希望，鸟儿可以在这所房子里和它们的宝宝们一起睡觉。



Spring

Spring shares a beautiful spring day between friends. Their explorations outside and probing questions provide learning opportunities in numerous STEM areas.



Connections to the Frameworks

Life Sciences:

From Molecules to Organisms: Plants and animals grow and change over time

Ecosystems: Animals use their environments to meet their needs to survive

Animals have different habitats

Crosscutting Concepts

Structure and Function

Stability and Change

Scientific & Engineering Practices

Asking questions and defining problems

Planning and carrying out investigations

Obtaining, evaluating and communicating information



Vocabulary

Recognize

Telescope

Yellow Breasted Chat

House Finch

Gregarious

Pileated Woodpecker

Crest

Carpenter ants




Breed



Potential Extended Learning Experiences

- Ask children if they have any birds at home as pets. Ask them to describe their features and behaviors and how they take care of their birds.
- Ask children if they notice any birds when they are playing outside, walking down the streets, or looking through their windows at home.
- Go outside for a nest-spotting walk with children. Take photographs of the nest that you find.
- If you have access to a real bird's nest, set up an observation station for children to explore it. Provide magnifying glasses, measuring tools (standard or non-standard), scale. What is the nest made of? What are some characteristics of the nest in regards to shape, colors, size? If a real nest is not available, pictures from your walk or other sources may be a good substitute.
- Read Mama Built a Little Nest by Jennifer Ward. Provide an array of nature items (i.e. sticks, leaves, grass) and other materials (i.e. string, paper) an actual bird's nest would be created from. Make dirt and water available for children to **combine** into mud. Invite children to **design and build** a bird's nest. How can the materials **stay together**? What **function** does each of the materials play?
- Provide various types of building blocks (i.e. wooden, big blocks, Legos) for children to **design and build** bird houses or **habitats**. Encourage them to **compare and contrast** the **stability** of various designs. Which is more stable? How do the different types and shapes of blocks effect the stability?
- Read The Three Little Pigs to the class. Challenge the children to **design and build** a "house" that will be a sound structure against wind. Allow them to carry out their **investigations** and **document** the results. Encourage them to **analyze** their results as to why some structures stayed together and some did not. Ask children what materials their house is built from.

Legend:




- | | |
|---|------------------------------------|
|  | Disciplinary Core Ideas |
|  | Crosscutting Concepts |
|  | Scientific & Engineering Practices |



Potential Extended Learning Experiences

- Choose a few areas outside with the children's help to take a photo of birds. Print photos and find a place to hang in classroom. Every 2 months, take another photo of the same spot. Print and post photo alongside previous one. **Compare and contrast** changes that have occurred over time and across **seasons**.
- Consider reading And Then It's Spring by Julie Fogliano or What Can You See in Spring? by Sian Smith. Discuss with children what they saw on their nature walk. Go out for another walk and encourage children to **observe and note** what they see on this walk that is the **same or new** this time. Examples may include cloudy vs sunny, wet vs dry, warm vs cool.
- Take a walk in your school's neighborhood. Provide children with **binoculars**, **magnifying glasses** and bags to make **observations** and collect items. Place items in the science area with observation tools for **exploration**. **Compare and contrast** the items collected. Have any **changed** since your last nature walk? How? Did you find items today that you had not before?
- Provide photos of birds that live in your school's area. Place binoculars for children to **observe** through the window in search of birds. **Compare and contrast characteristics of the birds such as color, size, shape, behavior**. Offer paper and crayons/markers for children to make **observational drawings** outside of window.
- This book is rich with questions (e.g., do birds make different sounds) and it could be used to generate excellent extensions around asking and answering questions.

Legend:

- | | |
|---|------------------------------------|
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