

## ↓ JULY 9

# Metal and Rubber Materials

This month, we continue the Engineering 101 materials themes by taking a fresh look at two previously explored materials: **metal and rubber materials**. We will compare and contrast these two materials and find out how they are often combined.

### HANDS-ON ACTIVITIES

#### 36 Compare, Contrast and Combine *Village Pavilion*

Review why rubber and metal are both useful materials, and then discover what can be made when you combine these two materials.

**Rubber** is flexible and soft. It stretches and is moldable. **Metal** is very strong, sturdy and hard. **Combined**, these materials can make wires, tires, rubber-covered steps on a step adder, metal dustpans with rubber lips or garden hoses.

#### 36 Crafting with Metal and Rubber *Village Pavilion*

Make your own musical instrument by combining rubber and metal.

#### 21 80 Exploring What Can Be Made with Metal and Rubber

*Armington & Sims Machine Shop  
and Mattox Home on Maple Lane*

Explore these two buildings to see how metal and rubber are used in industry (A&S) and in the home (Mattox Home).

#### 81 Inspiring Stories *McGuffey School*

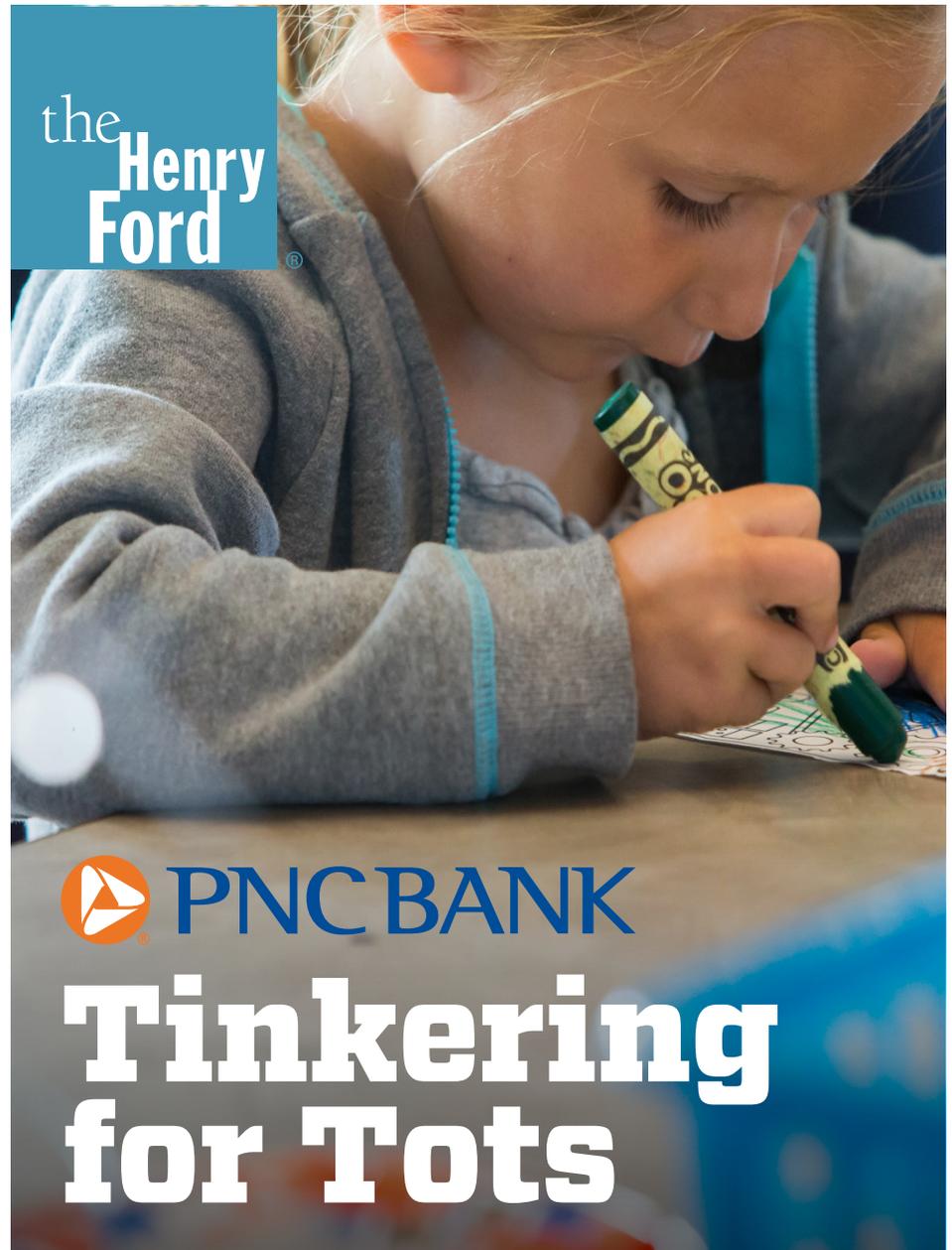
Join our storyteller, who will read stories to inspire your Tinkering Tot. Today's featured stories include *Bouncy Tires* by Mary Tillworth and Benjamin Burch, and *Ada Twist, Scientist*, by Andrea Beaty and David Roberts.

### ARTIFACT OF THE DAY

#### 18 Tin Shop

Tin was called the poor man's silver. Visit to see how flexible this metal can be.

▶ Look for the corresponding activity numbers in your **welcome guide map**.



the Henry Ford

 PNC BANK

# Tinkering for Tots

▶ GREENFIELD VILLAGE®

MAY – JULY

**Inspire big dreams from your little innovators.**

Little learners get a head full of STEAM (science, technology, engineering, arts and math) with our hands-on program. Designed for curious preschoolers, our inspired yet playful activities focus on themed materials and then expand outward with storytelling, crafting, building and artifact exploration.

# ↓ MAY 14

## Wood and Rock

This month, we continue the Engineering 101 materials themes by taking a fresh look at two previously explored materials: **wood and rock**. We will compare and contrast these two materials and find out how they are often combined.

### HANDS-ON ACTIVITIES

#### 99 Compare, Contrast and Combine *Liberty Craftworks Store Porch*

Explore how wood and rock are used and what happens when you combine the two materials.

#### 99 Crafting with Wood and Rock *Liberty Craftworks Store Porch*

Create a fun and colorful craft using wood pulp and crushed rocks.

#### 11 72 Exploring What Can Be Made with Wood and Rock

*Loranger Gristmill inside the Liberty Craftworks area and the Cotswold Cottage on Maple Lane*

Visit these two buildings to explore how wood and rock have been used to create both a structure for work and another to live in.

#### 16 Inspiring stories *Near the Spotsford Sawmill in Liberty Craftworks*

Join our storyteller, who will read Stories to inspire your Tinkering Tot. Today's featured stories include *What Do You Do With An Idea?* by Kobi Yamada and *Stone Soup* by Jon J. Muth

### ARTIFACT OF THE DAY

#### 32 Coaling Tower

Coaling towers, like this replica built for Greenfield Village in 2014, were an essential part of steam railroading. Without them, there was little way to effectively fuel the trains motive power. Built of wood, this tower delivered coal (a sedimentary rock) that is burned to create steam in the boilers of our village locomotives. Several times a day, our trains use this tower to take on coal. Maybe you'll get to see it in action during your visit.

▶ Look for the corresponding activity numbers in your **welcome guide map**.

# ↓ JUNE 11

## Paper and Natural Materials

This month, we continue the Engineering 101 materials themes by taking a fresh look at two previously explored materials: **paper and natural materials**. We will compare and contrast these two materials and find out how they are often combined.

### HANDS-ON ACTIVITIES

#### 11 Discovering Natural Materials *Liberty Craftworks*

Explore the buildings in Liberty Craftworks to learn about the natural materials used in each craft building to make their items. Skip the Tin Shop because we'll explore metals next month.

#### 36 Crafting with Natural Materials *Inside the Village Pavilion*

Natural materials like cotton and linen can be used to make paper as well as wood pulp. See how paper is made, and create something from natural materials yourself.

#### 81 Inspiring Stories *McGuffey School*

Join our storyteller, who will read stories to inspire your Tinkering Tot. Today's featured stories include *Nature's Day: Discover the world of wonder on your doorstep* by Kay Maquire and *What Do You Do With A Chance?* By Kobi Yamada.

### ARTIFACT OF THE DAY

#### 59 Edison's Carbonized Cotton Thread Filament Lightbulb

Thomas Edison and his team of workers experimented with many materials to create the first practical lightbulb, including bamboo and cardboard. On October 21, 1879, Edison's bulb with a filament (the tiny wire that glows inside the bulb) made of carbonized cotton sewing thread burned brightly for over 40 hours and was declared a success! The use of a natural material led to the development of this important scientific discovery that we use in our homes and businesses every day. How cool is that?

▶ Look for the corresponding activity numbers in your **welcome guide map**.