

ACTIVITY BOOK

PAPER IS POWER™



INTERNATIONAL  PAPER

HAMMERMILL®



Paper is Power™ is a curriculum of materials to help students realize that trees are an important part of products that people depend on every day, and most importantly, that you can have both healthy forests and products made from trees by taking care of the lands where they are grown.

Dear Students and Parents,

One day I received a heartfelt letter from a little girl named Emma begging International Paper to stop cutting down trees to make paper. As a father, I applauded her initiative. But I realized that many other students much like Emma do not understand the differences between working forests and the forests they might find in a national park. Paper, like the food we eat, comes from tree farms.

We decided that we should find a fun and engaging way to show students the process that produces paper—and so we created this coloring book. In addition to the manufacturing process, it also explains conservation efforts we here at International Paper are taking as careful stewards of our working forests to ensure their health for generations to come.

With this coloring book, students will gain a sense of how the paper in their classroom got there. We also hope that the process we show will foster their curiosity about how other objects are produced and spark their imaginations.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Mark Sutton', with a stylized, cursive script.

Mark S. Sutton
Chairman and Chief Executive Officer
International Paper Company

Did you know?

1. There are more trees and forests today in the U.S. than there were 60 years ago.
2. Most forests in the United States are not in national or state parks. Instead, they are owned by people and families.

These privately-owned forests are often working forests. We call them “working forests” because, just like working farms, these forests help produce goods.

3. Working forests produce trees to make a wide range of goods, including paper. When working forests are tended with care, their trees are a renewable resource.

Here's why:

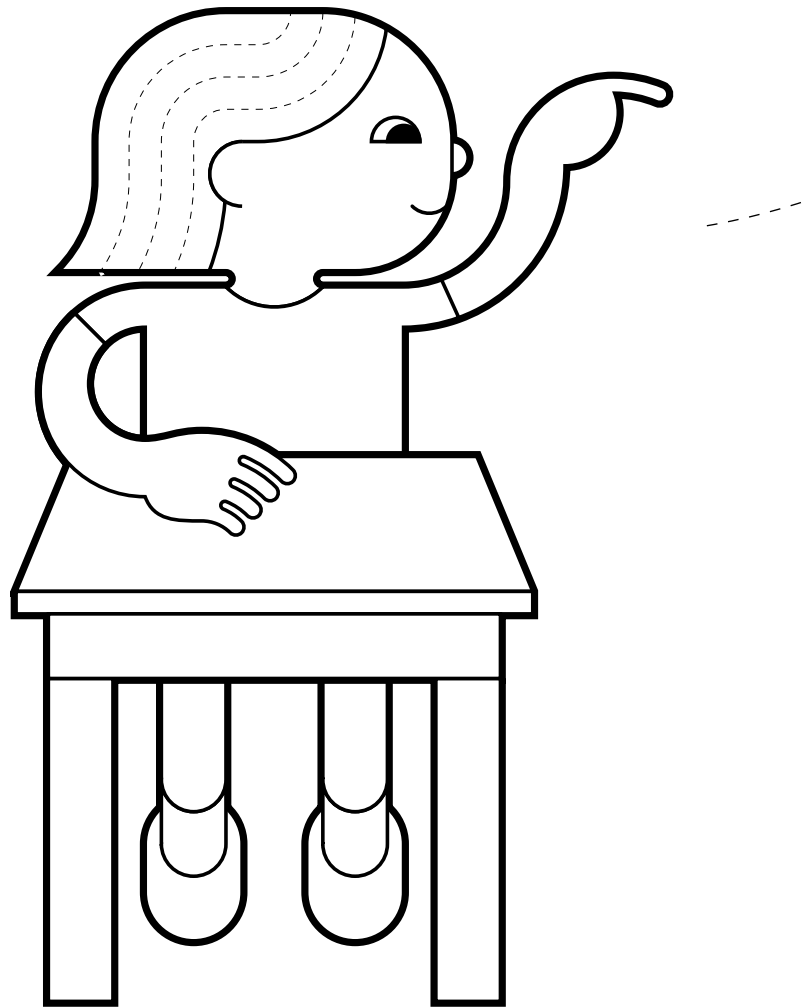
Owners of working forests plant even more trees than they harvest. More than 1.7 million trees are planted in working forests every single day!

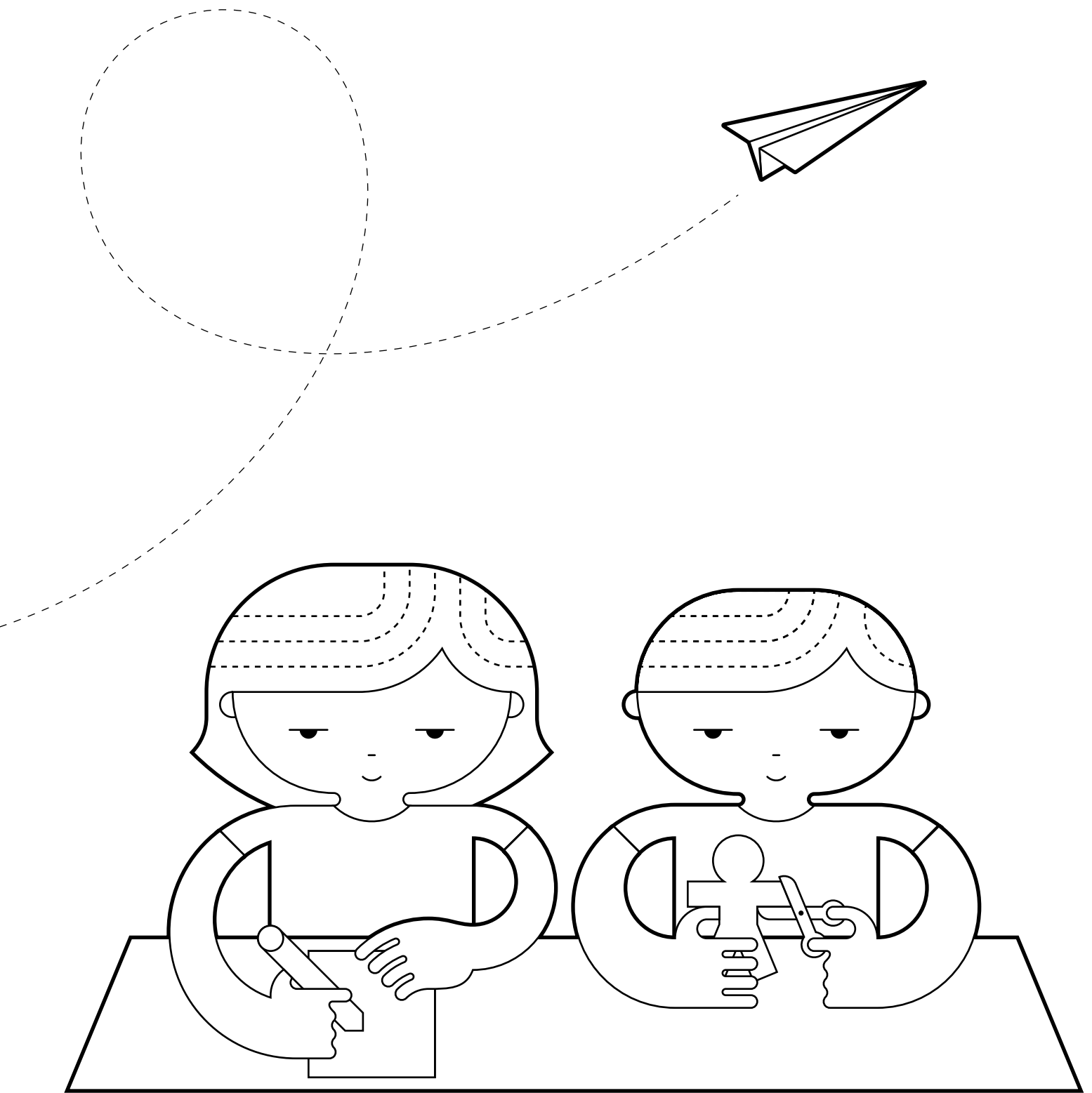
In the U.S., twice as much wood is grown as harvested.

These forests do so much more than just provide paper, when they are responsibly managed. They help the environment. The trees provide a habitat for countless animals. They help cool the earth's temperature. They protect clean water in rivers and streams. Perhaps most importantly, trees absorb carbon dioxide and produce oxygen. Forests are like air-cleaning machines!

Paper companies like International Paper ensure that trees are a renewable resource.

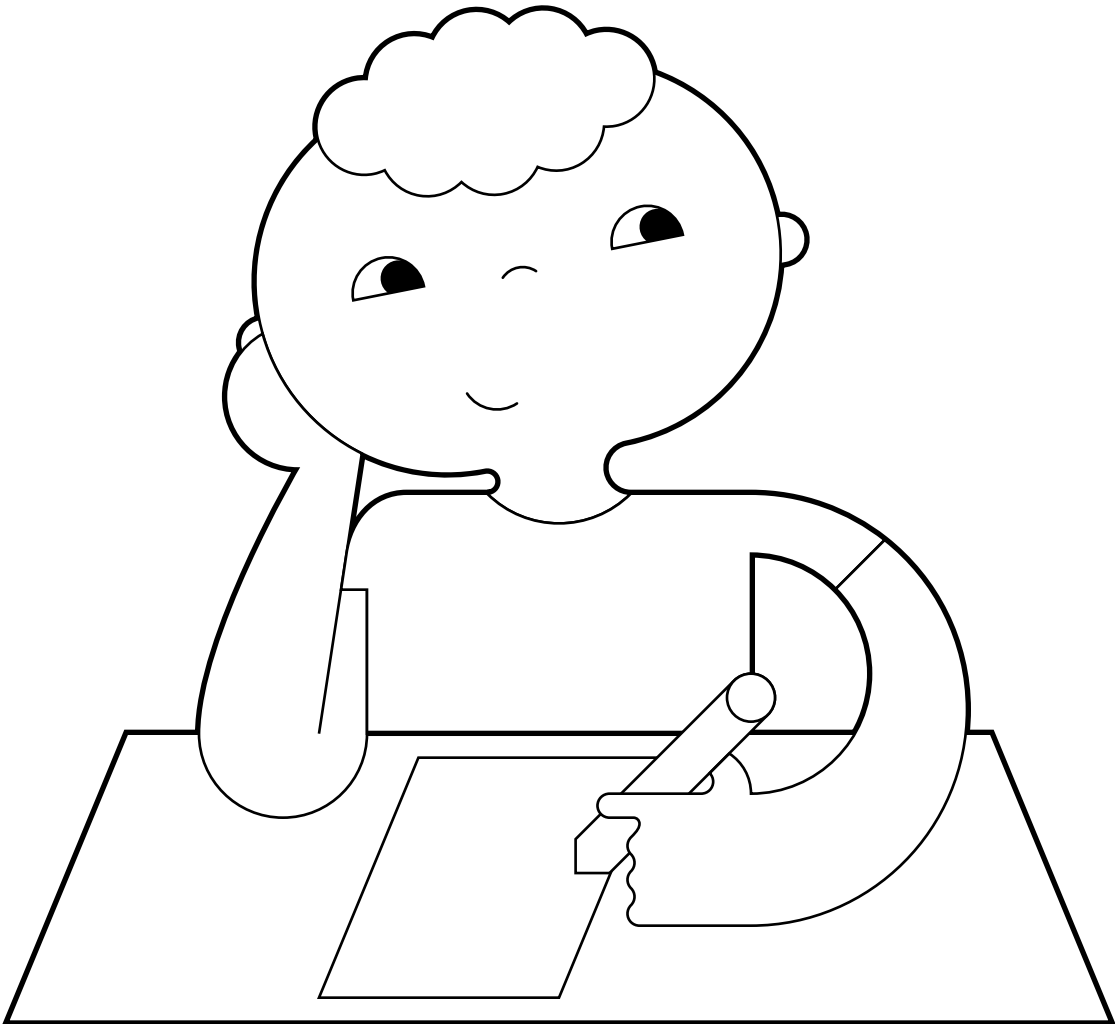
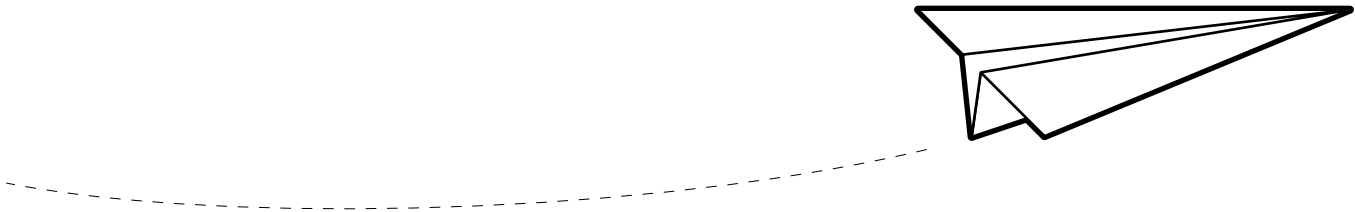
We take good care of our working forests, just as they take good care of us.





**Think of all the things
we do with paper!** We use it to
write, to draw, to paint, to cut, to fold,
to make things and to dream.

**Have you ever wondered
where paper comes from?**



Paper comes from forests.

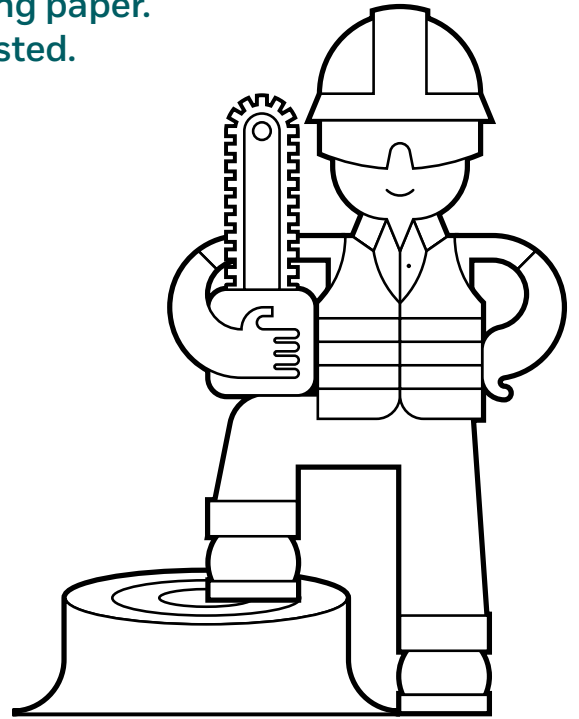
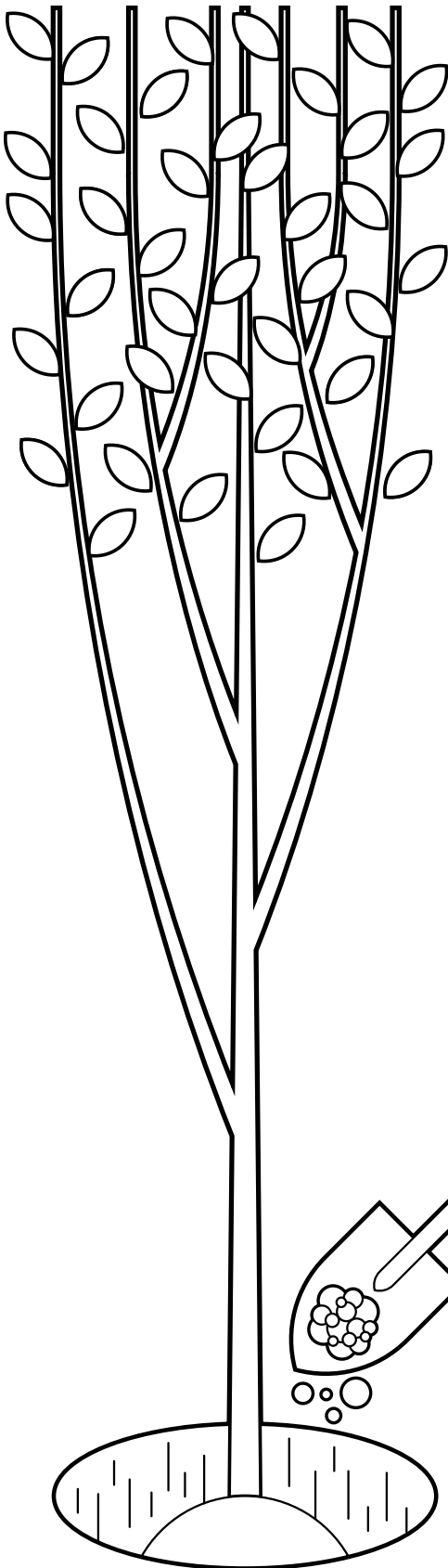


All over the U.S., there are private, working forests.

Here, trees are carefully planted and cared for. Thanks to these working forests, there are more trees in the U.S. today than there were 60 years ago!

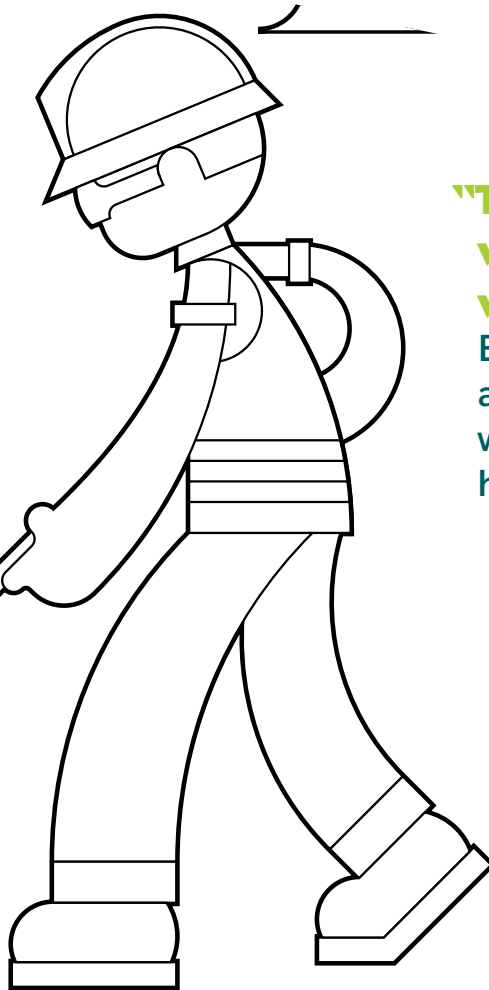
In working forests, trees are harvested.

They are used for many different products, including paper. Foresters decide which trees are ready to be harvested.

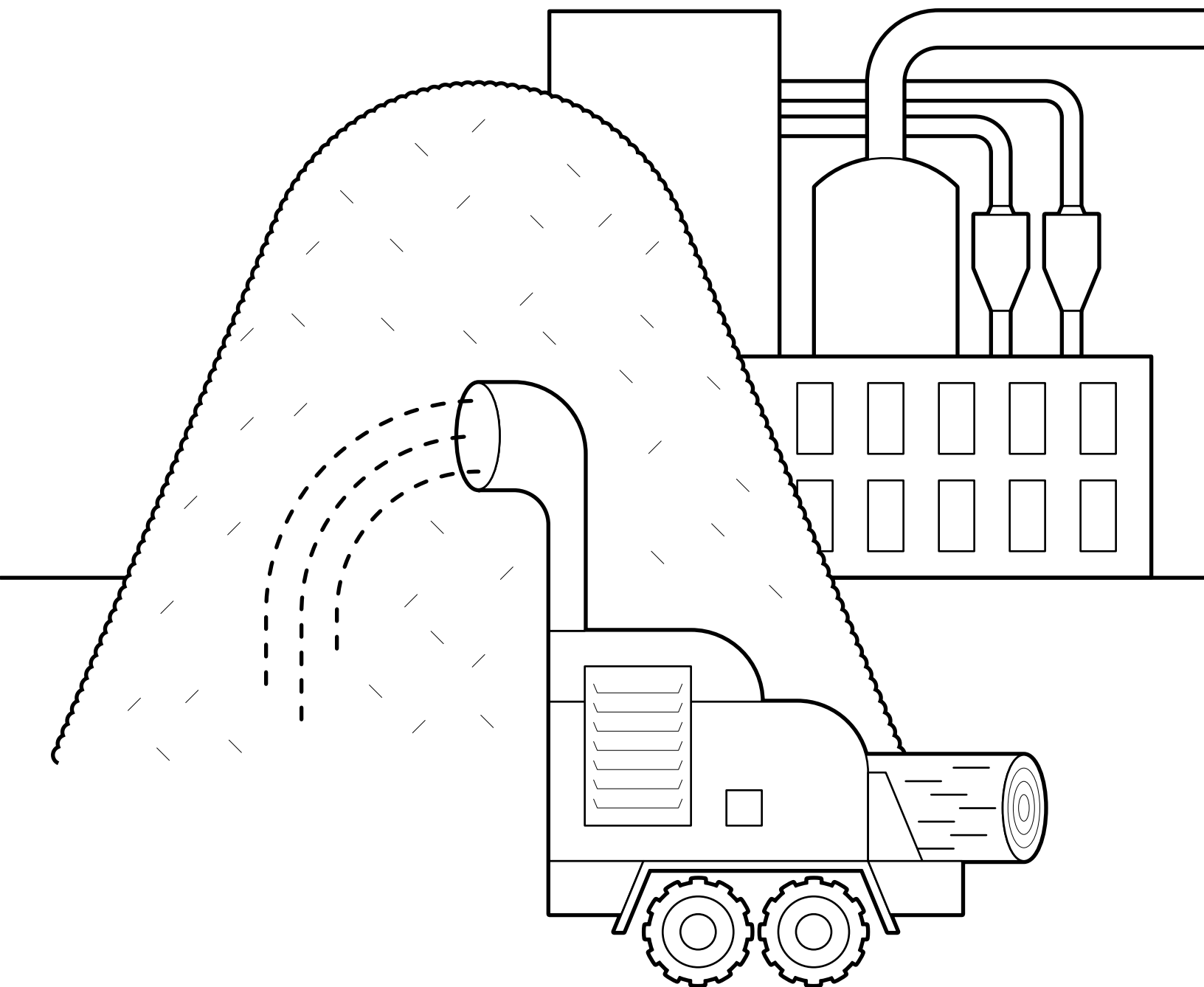


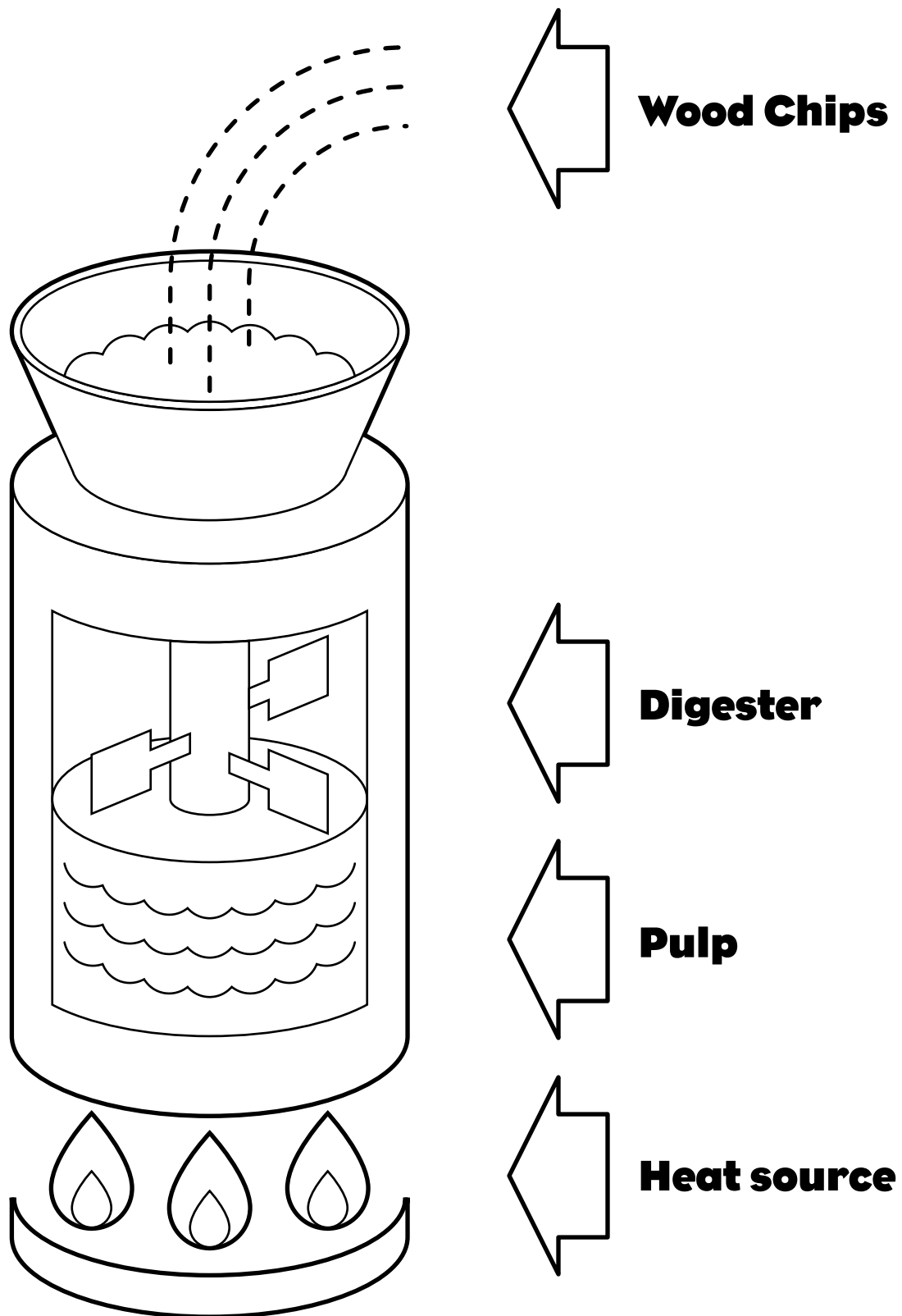
"Timber!" the workers shout when the trees fall.

Every day, new trees are planted, too. This way, the forest will stay healthy and strong.



After a tree is cut, it is brought to the paper mill. The paper mill is a factory where paper is made. First, the bark is removed. Then, the logs are put through a wood chipper. This machine cuts the logs into tiny pieces. These are called wood chips.



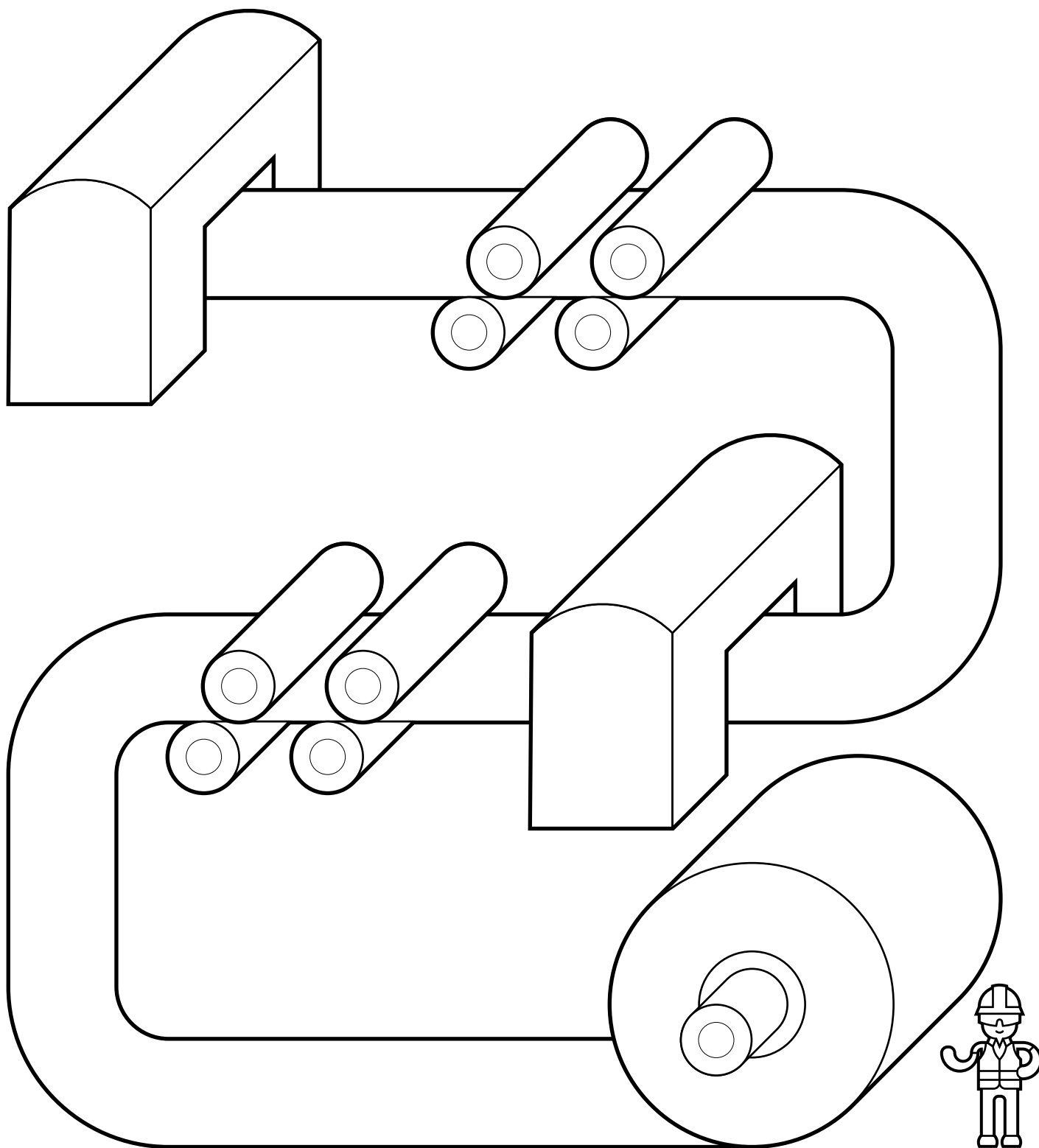


Next, the wood chips are placed in a machine called a digester.

Just like your stomach breaks down your food, the digester breaks down the wood chips. The digester boils wood chips in water and chemicals. Little by little, the wood chips dissolve into a thick, gooey, brown liquid called pulp.

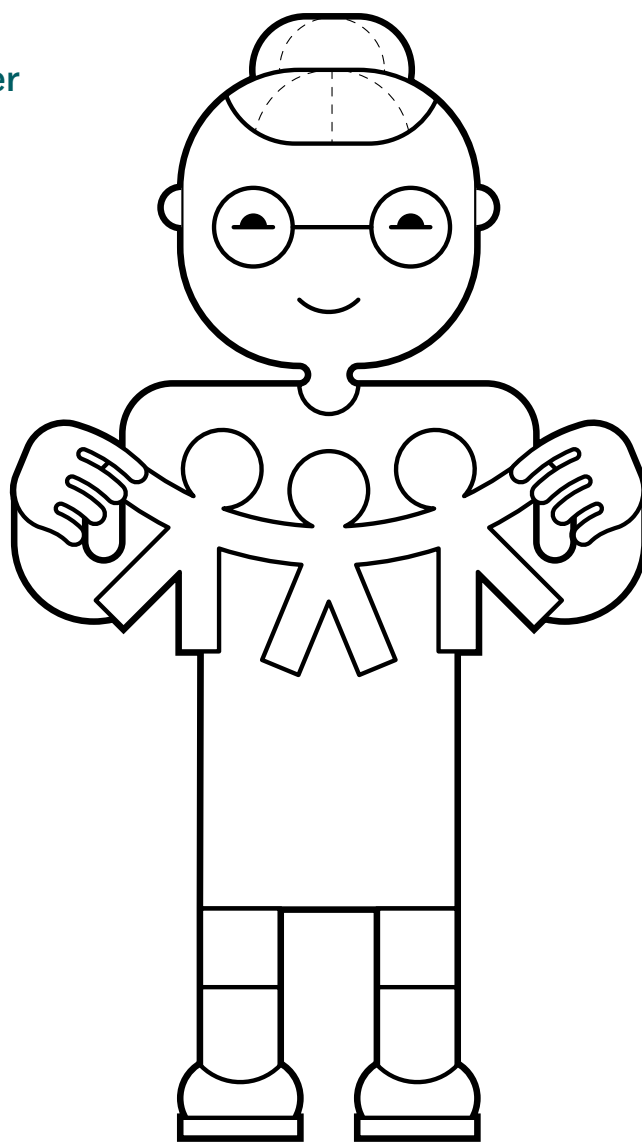
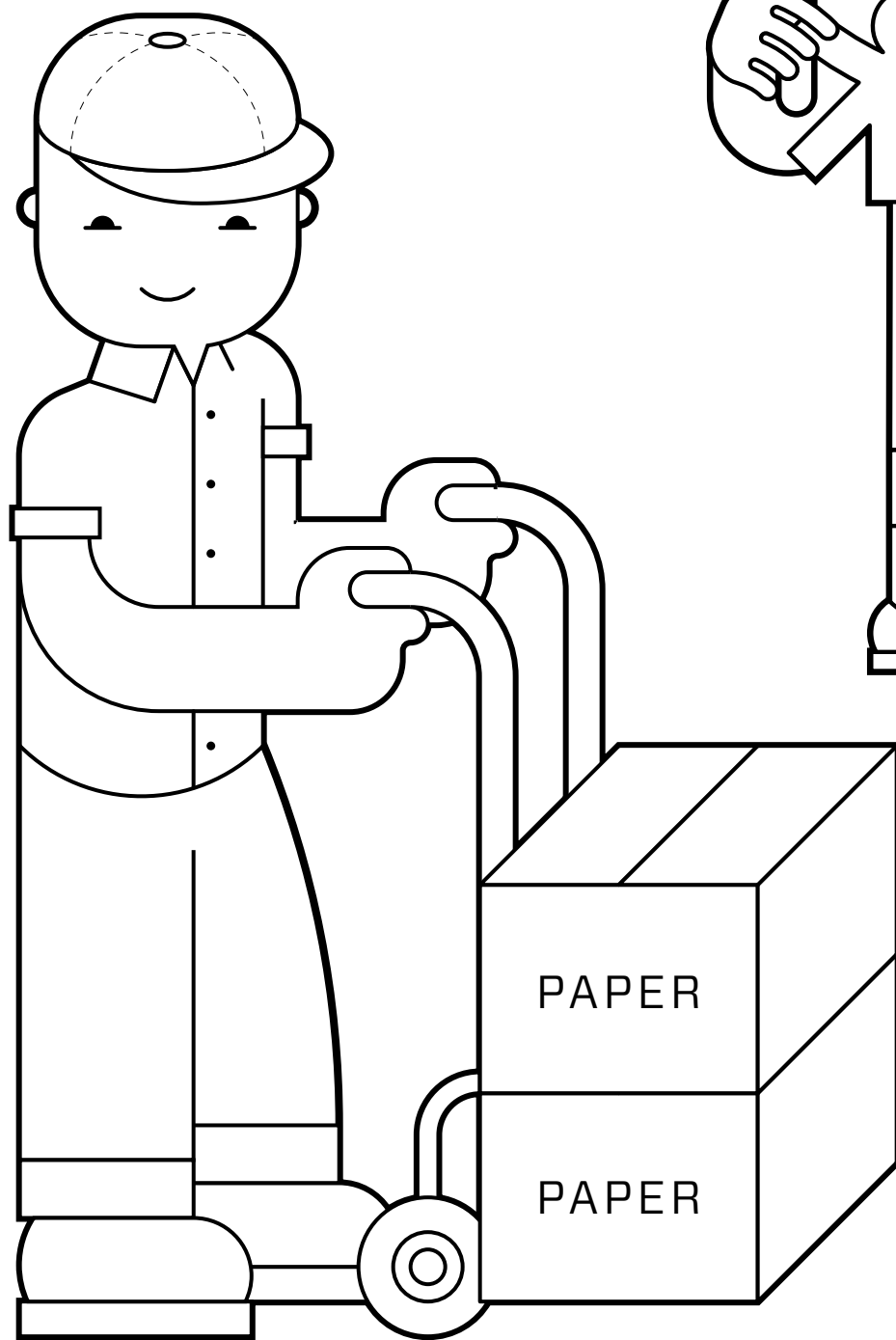


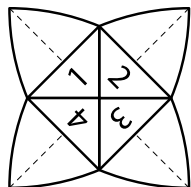
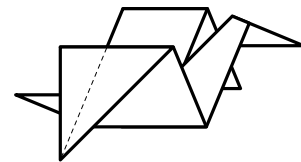
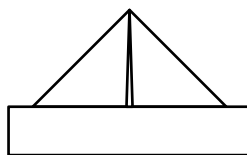
Workers add chemicals to make the pulp strong and clean. This helps to make the pulp white. If they want to make colored paper, they add dye to make colored pulp. What is your favorite color? Help the factory workers dye the pulp by coloring the page.



Afterward, the pulp is pressed onto a big screen. As the pulp is flattened, the water is squeezed out. Then, dryers steam the pulp until it is dry. Next, the dry pulp is rolled into one huge roll of paper! The rolls are so big that they are taller than a grown-up! The paper is cut into smaller rolls and then into sheets.

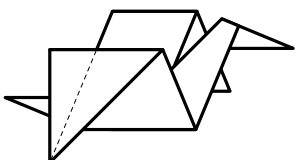
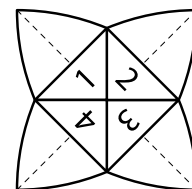
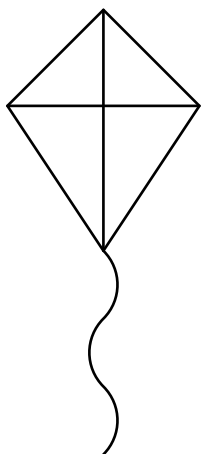
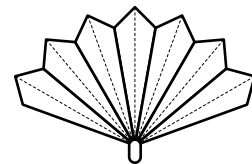
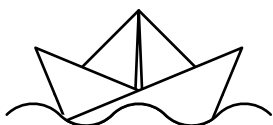
Finally, a truck brings the paper to your school. Your teacher brings the paper to your classroom. When you are finished using paper, you put it in the recycling bin. And then the whole paper-making process starts all over again!





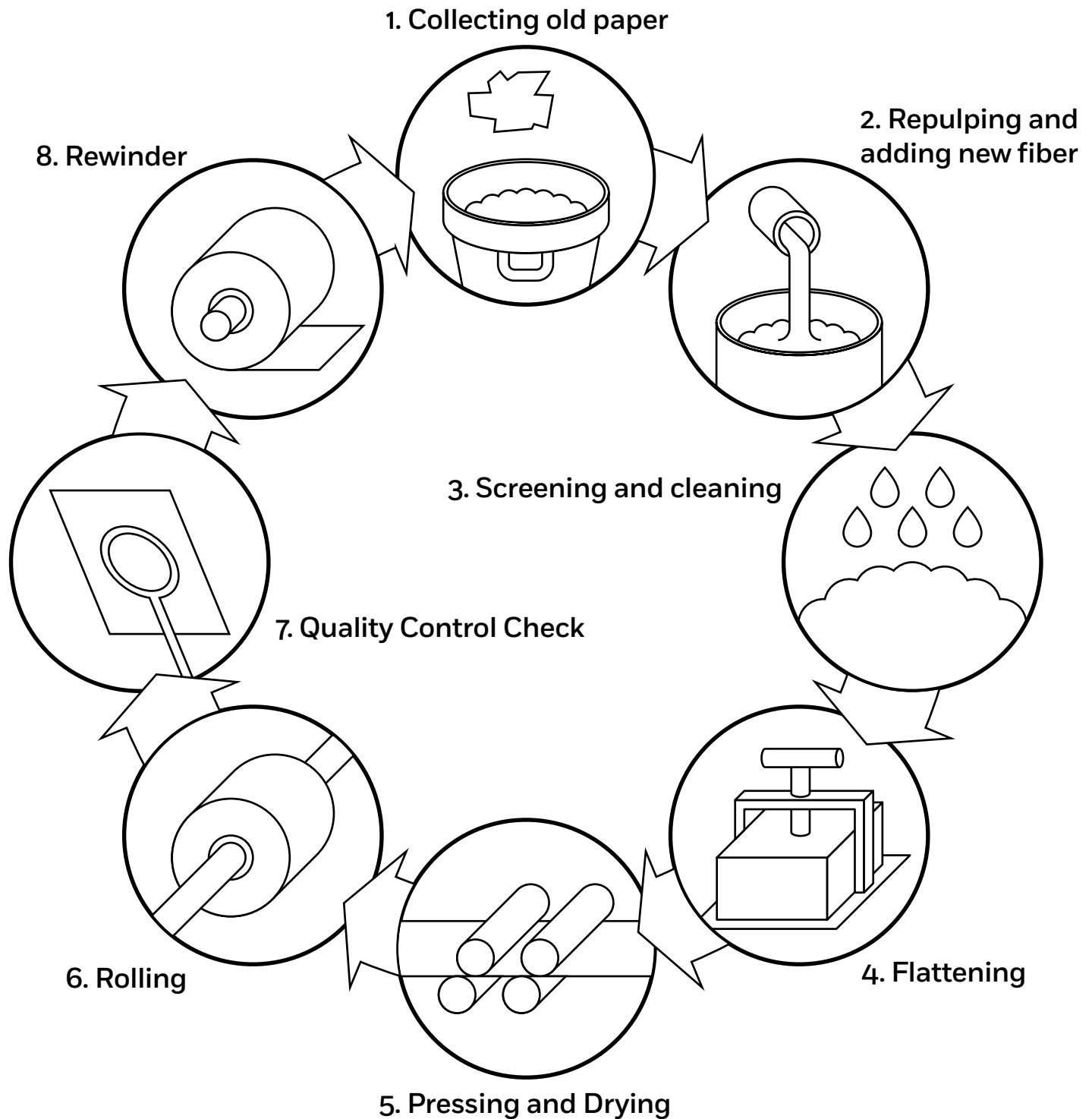
What will you do with paper?

Draw your favorite thing to do with paper on this page. Remember, paper is power!



When we are done with paper, we recycle it.

Recycled paper is turned back into pulp ...
and the whole paper-making process starts again.





Test Your Knowledge

Now that you are a paper-making expert, show what you know with the writing exercises below.

1. STEPS IN A PROCESS

Explain the papermaking process to a friend. You can both draw and write the steps. Use pages 6 through 10 to help you. Be sure to use sequence words such as: First, Next, Then, Afterward, Later, Last,

Use the table below to help you explain the process. The first word in each sentence has been provided.

What is the first thing that needs to happen to make paper?	First,
What happens next?	Next,
What happens after that?	Afterward,
What happens later?	Later,
What happens then?	Then,
What happens next?	Next,
What happens after that?	Afterward,
What happens last?	Last,

2. MAKE A PROCESS DIAGRAM

Look at the process diagram on page 13 for recycling paper. Can you make a process diagram for the steps in making paper from scratch? Use pages 6 through 10 to help you. Be sure to number and draw the steps!

3. COMPARE AND CONTRAST

Compare and contrast the process of recycling paper and the process of creating paper from scratch. Use the process diagram on page 13 and your own process diagram for making paper from scratch to help you. Which steps do both processes have in common? Which steps are different? Which process is longer?

4. WRITE A DESCRIPTIVE PARAGRAPH

Look at one of the pictures in this coloring book of a forest. Use sensory language to describe it in a descriptive paragraph. Be sure your paragraph answers the following questions:

- How does the forest smell?
- What sounds do you hear in the forest?
- What does the ground feel like under your feet?
- What fruit or nuts can you taste in the forest?
- What does the forest look like?

Here are some sensory words to help you:

SCENT	TASTE	TOUCH	SEE	HEAR
Fresh	Tangy	Rough	Green	Crackling twigs
Pine	Bitter	Smooth	Tall	Whistling winds
Clean	Sweet	Spiky	Magnificent	Hooting owls
Damp	Fruity	Furry	Ancient	Gurgling waterfalls
Sweet	Peppery	Knotted	Towering	Babbling brooks
Fragrant	Syrupy	Wet/Dry	Swaying	Swaying branches
				Crunching leaves



**If forests are
managed with care,
we can enjoy both
paper and beautiful
forests for a very
long time.**

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Illustrations by Jose Ortiz