

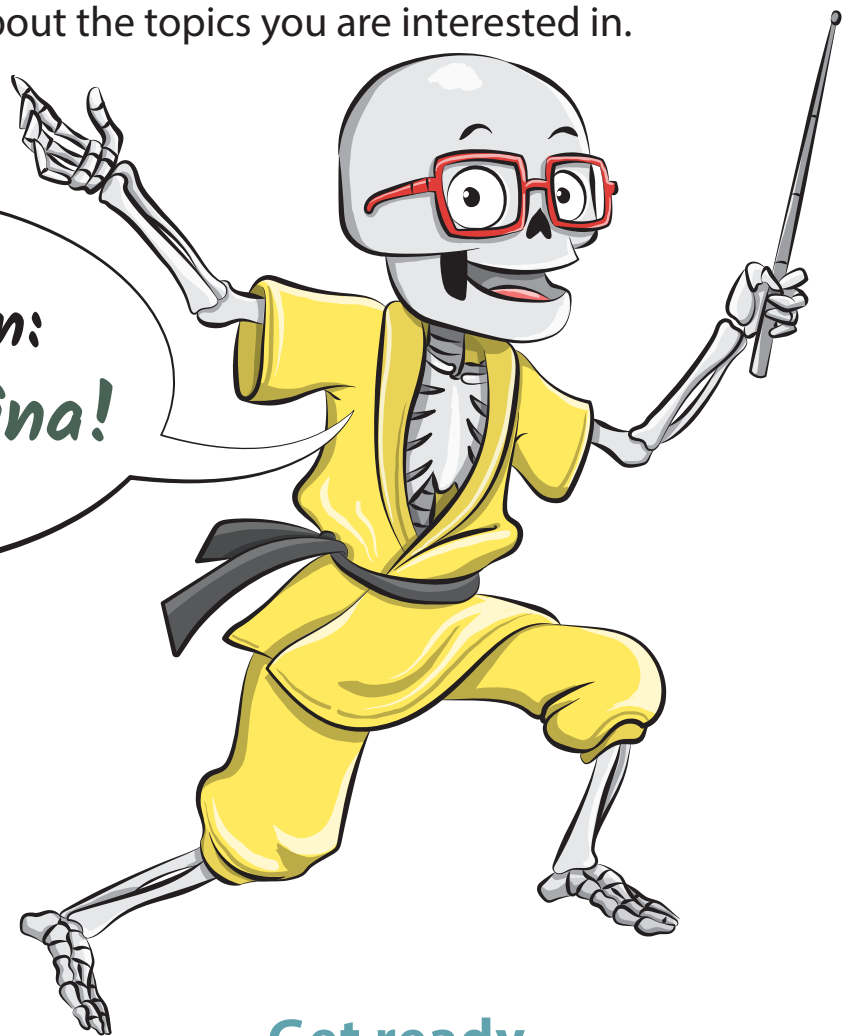
Hello Adventurer!

Welcome to Adventure 3 - The Circulatory System.

In this workbook, you will learn about Ancient China and your body's circulatory system. There will be information to read, activities to complete, and quizzes to take when you are ready to challenge yourself! Take your time along the way - spend as much or as little time as you like on each activity, and do not forget to use additional resources to learn more about the topics you are interested in.

Good luck, and have fun!

*Destination:
Ancient China!*



**Get ready
to start flowing!**

LEARN ABOUT

The Circulatory System

This bodily highway delivers all the nutrients you need!

VISIT

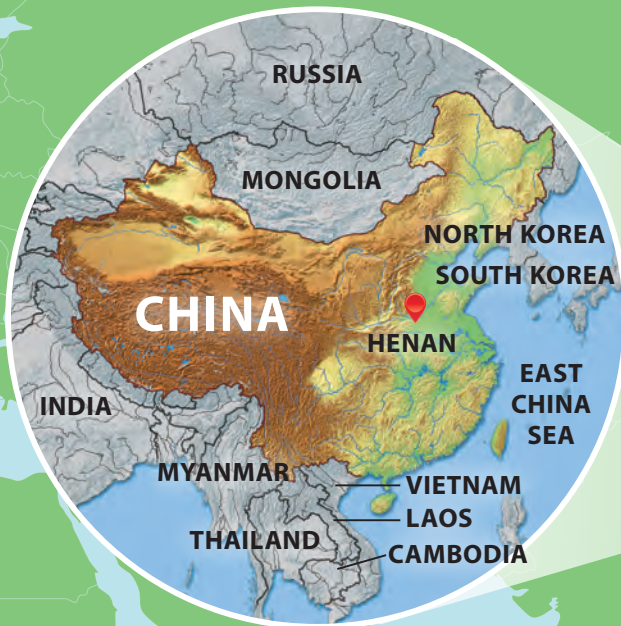
Ancient China

As pirates threaten the coast, the civilians must unify if they are to withstand the assault.

MEET

Tianyuan and the Shaolin Monks

as they harness their internal strength.



欢迎

(Huānyíng)*

That means "Welcome!" in Mandarin Chinese.

***Say it like this: "hoo-ahn-YING"**

The strongest syllable is shown in CAPITALS.

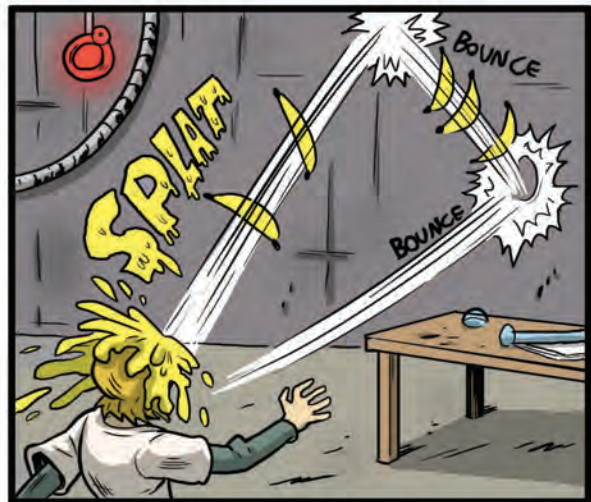
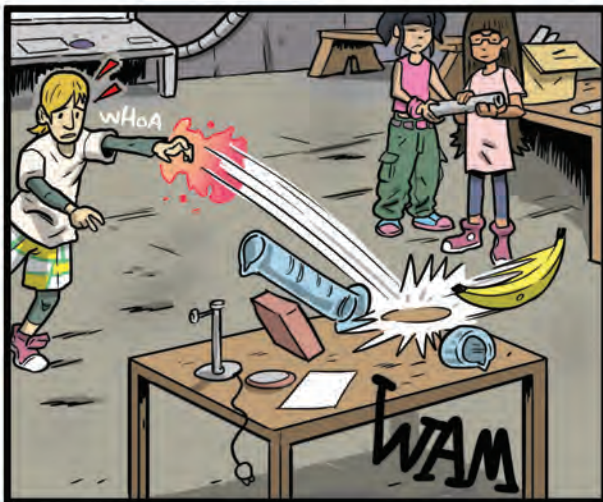
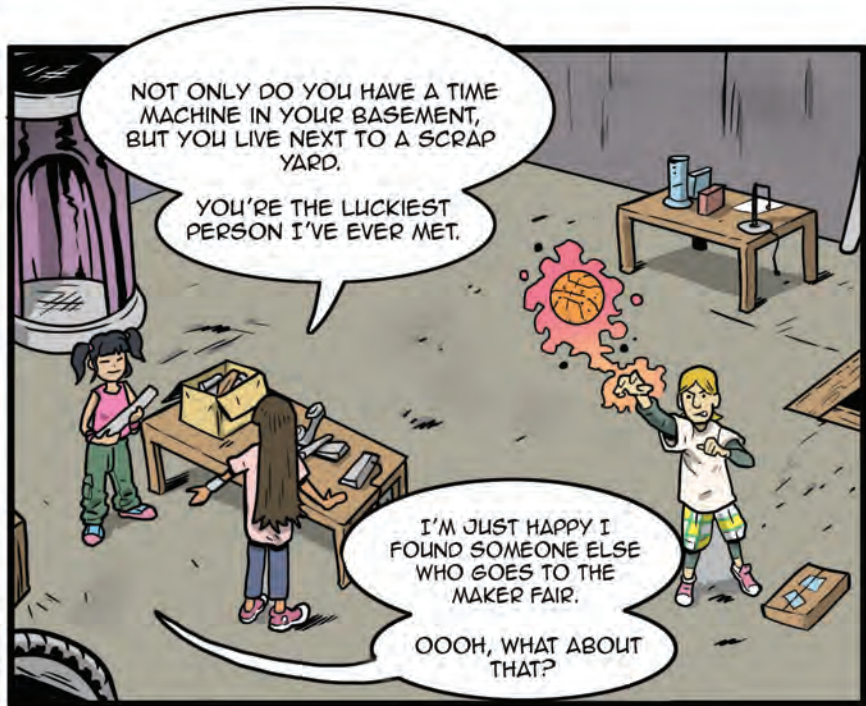


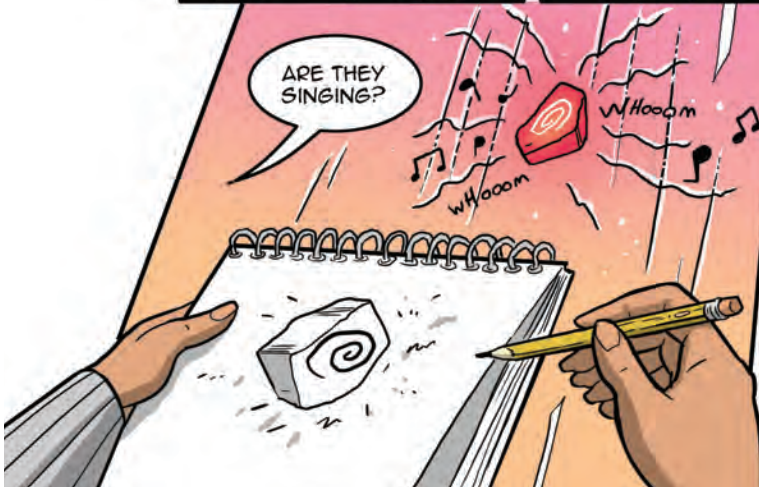
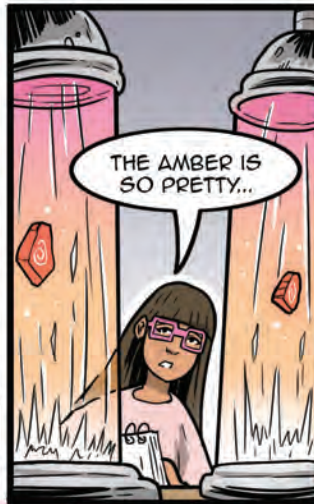
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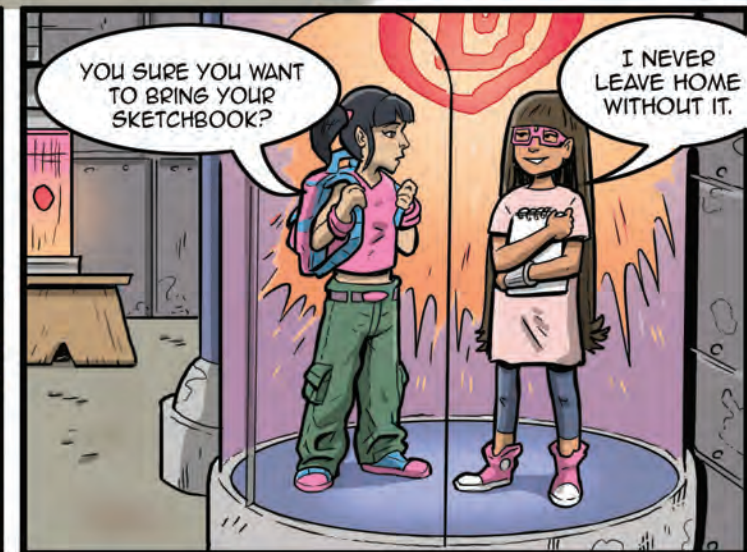
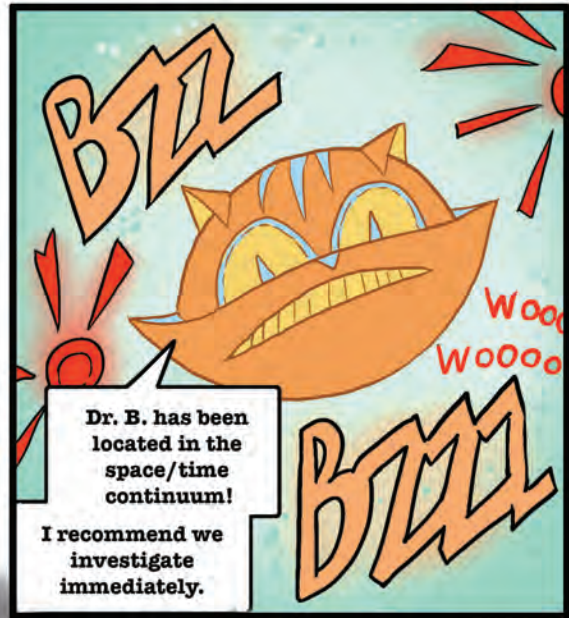
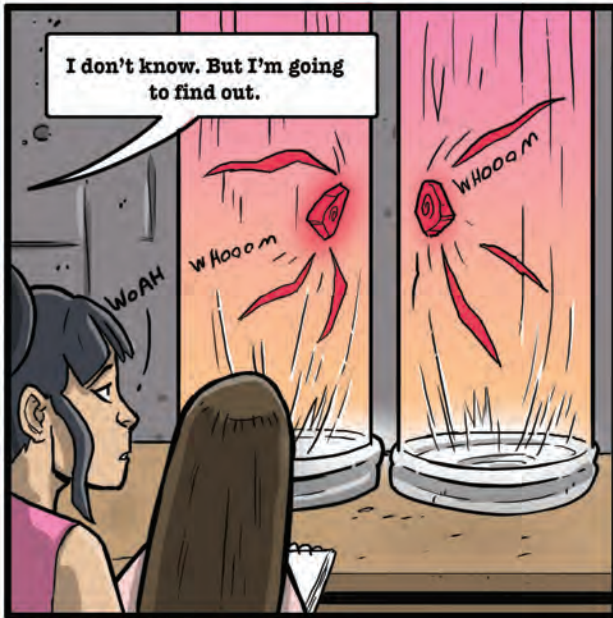


Time Skaters Adventure 3

The Zen is Mightier than the Sword







Learning Calendar

Part **1**
**Know
Your
History**



Gather the adventure equipment you'll need from around the house - find the checklist on pages 24 and 25!

Locate China on a world map using a globe, an atlas, or an online map.

Prepare your mind with the comic **Time Skaters Adventure 3 - The Zen is Mightier than the Sword**. Find it at the beginning of this Adventure Guide!

Meditate on the past with *Know Your History*.

Dip into *Know Your Script*.

Discover *Silk Road Secrets*.

Get moving and *Go Play Go*.

Fabricate *Fancy Fans*.

Solve *Ancient China Crossword*.

Take *Know Your History Information Review*.

Part **2**
**Know
Your
Circulatory
System**

Keep current and *Know Your Circulatory System*.

De-stress with *Know Your Calm*.

Hop to *Heartbeat Hopskotch*.

Complete *Pour Your Heart Out*.



Go with the Flow.

Complete the *Circulatory System Word Search*.

Take *Know Your Circulatory System Information Review*.

Part **3**
Know Your Appetite



Imbibe inspiration in *Know Your Appetite*.

Read the recipes on the following pages. Make a shopping list, purchase ingredients, and get your kitchen ready!

Make *Easy Chinese Moon Cakes* and *Chinese Dumplings*.


Share your dishes with your family. Discuss *Thoughts for Young Chefs* around the table!

Part **4**
Show What You Know!



Take the Adventure 3 *Cumulative Information Review*.

Check out *Further Reading* for more opportunities to learn.



Great job on all your hard work!

Fancy Fans

The history of Chinese fans goes back thousands of years — archaeologists have even discovered intact fans from the 2nd century B.C. A fan works by creating airflow, which increases the rate at which your sweat evaporates. This helps to cool you off faster. Before air conditioning or electric fans, a fan was effective and easy to carry around, which is probably why this Chinese innovation spread around the world.

Fans were often decorated with art and poetry, and made out of materials ranging from paper to feathers and bamboo. Folding fans are also used in some performances of Kung Fu!



You can make a very simple folding fan at home using nothing but paper, tape, and some tools to decorate.

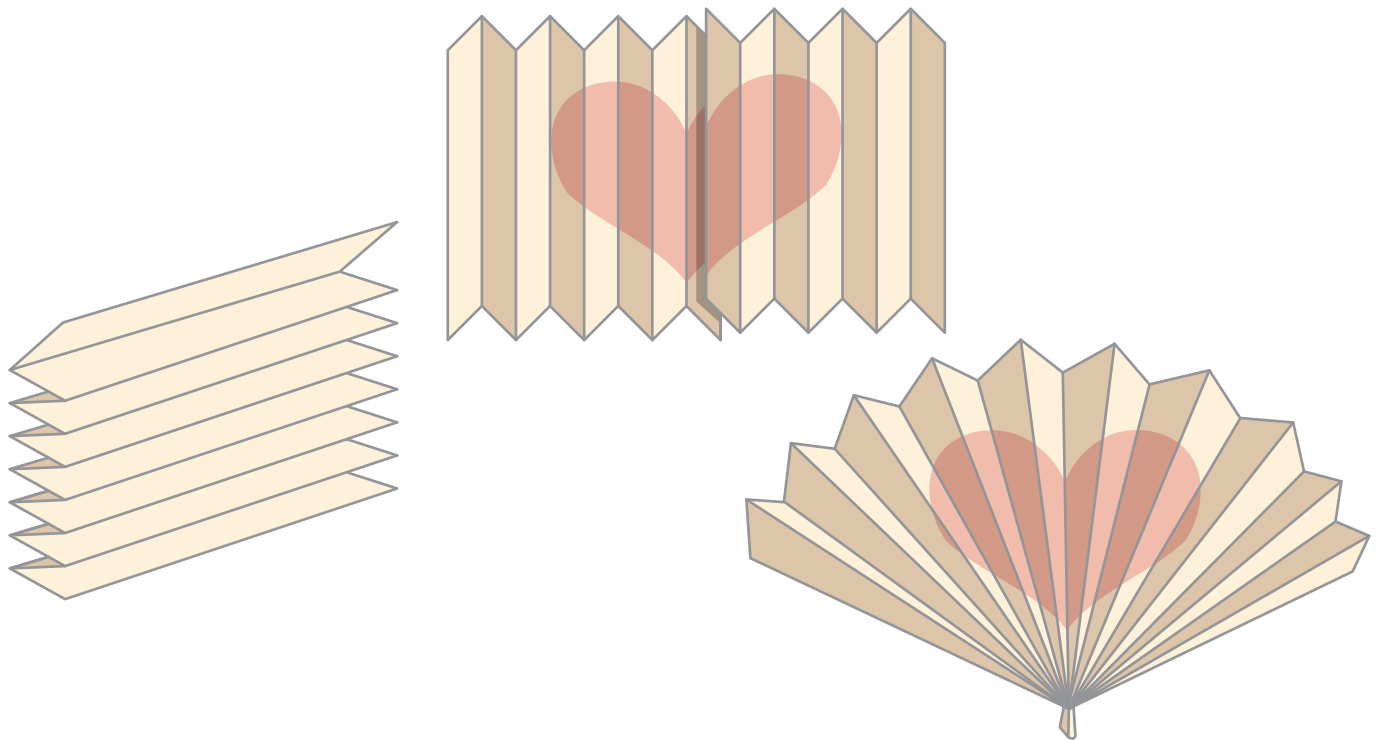
Materials:

- **Construction paper or other crafting paper (2 sheets)**
- **Pens and/or markers**
- **Tape**
- **Optional: Feathers, sequins, glitter glue, stickers, etc.**

Directions:

1. Lay your paper down with the short sides touching. Pull one piece over the other about half an inch so they slightly overlap.
2. Use your art skills to make a design, draw a picture or write a message.
3. Starting from one end, fold the paper half an inch over one way and then the other in an accordion fashion. Do this with both pieces of paper.
4. Connect the two pieces of paper by taping the last and first fold together. Do your best to maintain your picture.
5. Hold the accordion shape together so it is very small, and then tape together the bottom inch of the paper to make a grip. Make sure the rest of the fan is still able to spread out!

Now you have a fan you can use to cool yourself off just like people have done across the world for millennia.



The Heart of the Matter



You can feel your heart at work in your chest - *lub-dub, lub-dub, lub-dub*. It's beating constantly. Your heart is the hardest working muscle in your body, but what is it doing exactly?

Your heart is an important part of your circulatory system. Its job is to pump blood throughout your body.

The movement of blood through your heart and around your body is called **circulation**.

Why is blood so important?

Blood is responsible for providing your body with oxygen and special chemicals like hormones, as well as for removing waste and carbon dioxide. Your blood contains plasma and three types of blood cells: red blood cells, white blood cells, and platelets. You can learn more about each part on the next page.

White Blood Cells

are part of the immune system. They help your body fight infection from bacteria, viruses, and fungi.

Plasma

is the yellow, watery part of your blood. It carries cells, nutrients, salts, and proteins. It is more than 90% water.

Blood

Red Blood Cells

have hemoglobin, a protein that carries oxygen from your lungs to other parts of your body.

Platelets

are tiny blood cells involved in clotting. If you get scratched, platelets migrate to the cut, clot the blood, and stop the bleeding.

Heartbeat Hopskotch



Did you know your heart is a muscle?

The heart is responsible for supporting your movement, as well as helping you breath, eat, and drink. With every heartbeat, the heart is delivering **oxygen** and **nutrients** to the body. The blood also transports **carbon dioxide*** and **waste products** out of the body.

One heartbeat cycle starts when blood from the body enters the heart from the inferior and superior **vena cava***. It flows from the right atrium to the right ventricle, and then to the lungs. In the lungs, blood releases carbon dioxide and waste products and picks up oxygen. Then the blood travels back to the heart's left atrium. From there, it moves from the left atrium to the left ventricle and is pumped out to the body.

This cycle takes place in just one second!

*Say them like this:

carbon dioxide - "CAR-bin die-OX-ide"

vena cava - "VANE-uh KAV-uh"

The strongest syllable is always shown in **CAPITALS** and **red**.

Adventurer, how quickly can you complete the heartbeat hopscotch on the next page? One round equals one heartbeat cycle.

Materials:

- **Sidewalk chalk**



Directions:

1. Create a simple Heartbeat Hopscotch by copying the hopscotch of the next page using your sidewalk chalk (ask an adult to help you find the best area for your hopscotch). Make sure each square is at least 1 foot-by-1 foot, but don't worry if your lines aren't perfect!
2. Travel like the flow of blood. Complete a heartbeat cycle by hopping through your hopscotch drawing.
3. Quiz yourself to see if you know your heart beat cycle by describing the cycle with your eyes closed.

Did you know that your heart beats 60 to 100 times a minute?
That is over 100,000 times a day!



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