3rd Grade

AMI Packet #1

NAME: _____

Complete and return this entire packet to your teacher.

2023-2024

Name: _____

Read the story:
"3D Printing Aids Animals"

Answer the questions below using complete sentences.

What is this passage mostly about?

What did the team use the three-dimensional printer to do?

What is the meaning of the word "aids", and why do you think the author used it in the title?

What do you think could have happened if the team had not been able to create a replacement shell for Freddy?

3D Printing Aids Animals

A group of animal lovers in Brazil helps badly hurt animals. They use computers to create animal body parts.

Three-dimensional (3D) printing can make all sorts of things. It can make a vase or a toy truck. In one case, the Brazil team used 3D printing to help a tortoise. A forest fire had destroyed almost all of her shell. A shell is something a tortoise can't live without. The group named the tortoise Freddy and gave her another chance at life.

First, they took photos of Freddy. They also took photos of a healthy tortoise with a complete shell. Then they used a computer program to design a new plastic shell for Freddy. A 3D printer created the shell. It was made in three parts and fit together like a puzzle. The finished shell was attached to Freddy's body.

Freddy now lives with the doctor who helped save her life.

Do You Know?

3D printing takes a lot of plastic. Now three Canadian students have invented the ProtoCycler. It's a device that turns waste plastic such as bottles into the plastic that can be used in a 3D printer.

Tortoise Shell, Take Two

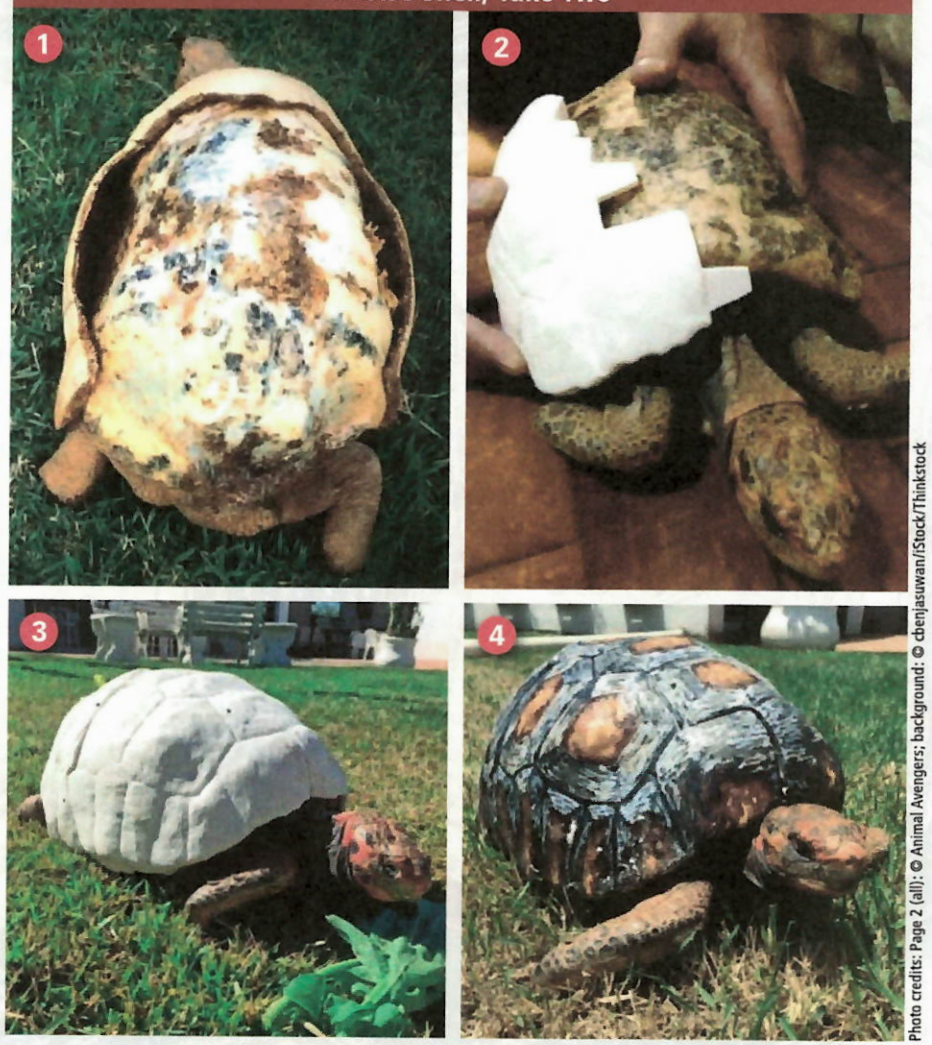


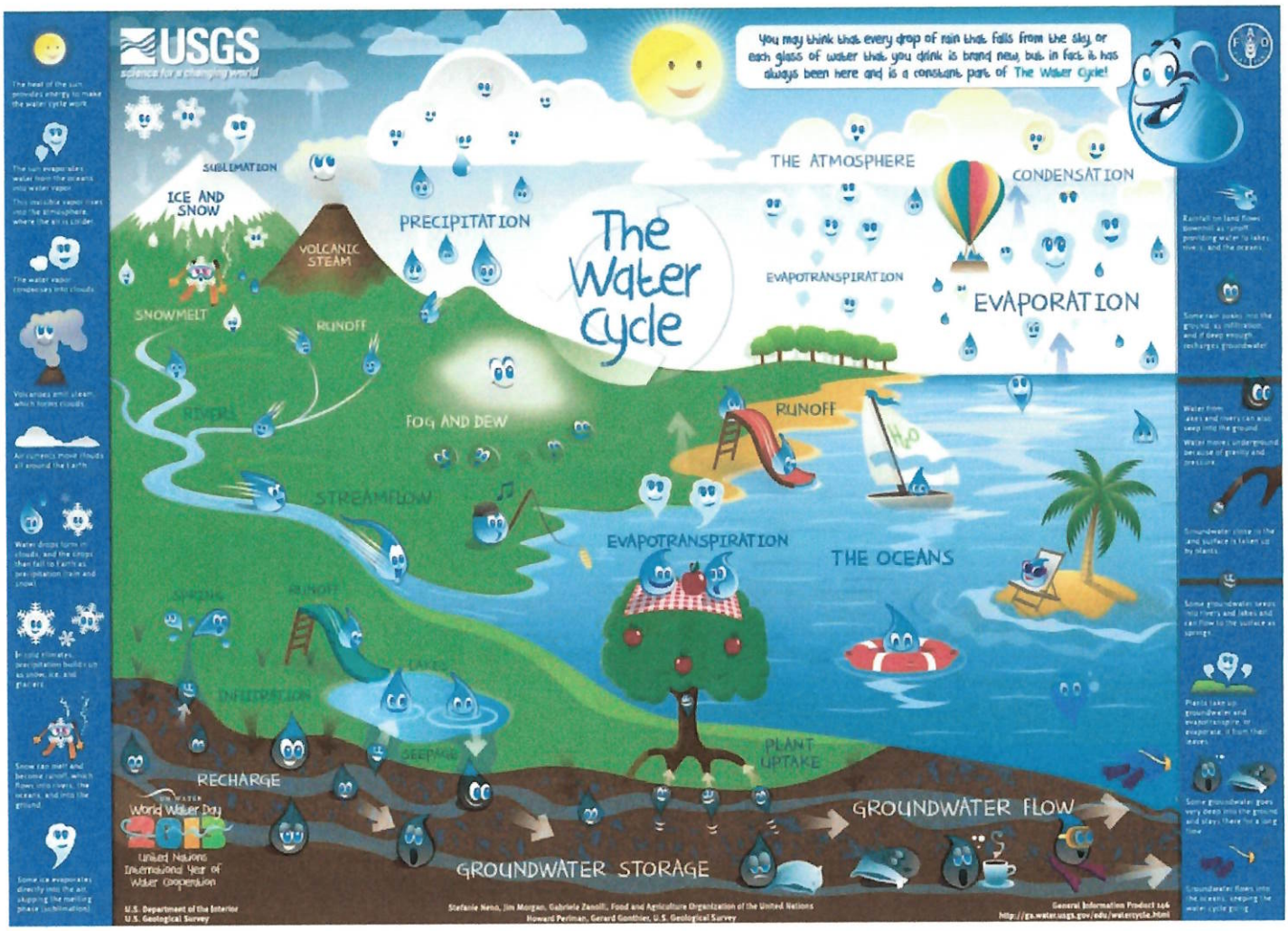
Photo credits: Page 2 (all): © Animal Avengers; background: © cbenjasuwan/iStock/Thinkstock

1 After the fire, Freddy's shell was nearly gone. 2 The team of Matheus Rabello, Paulo Miamoto, Roberto Fecchio, Cicero Moraes, Sergio Camargo, and Rodrigo Rabello fit together the parts of her plastic shell. 3 The new shell fit well, but the white plastic was not a natural look. 4 Artist Yuri Caldera hand-painted the shell to look like a shell design from nature. The results are amazing!

 NAME: _____

Can water change?

The amount of water on Earth really doesn't change as a whole. However, it does move from place to place on the Earth's surface and in the atmosphere (sky). When it does this it can change from being a liquid to a solid to a gas and back again. Below is a model showing the movement of water. We call this the water cycle.



Notice that water can be a liquid (water or rain), a solid (ice/snow), or a gas (water vapor). When water is a gas, it is called water vapor. Water vapor is invisible. If you are seeing steam or fog, it is actually fine particles of water in the air!. Clouds are mostly fine water particles suspended in the air, but they can also be made out of fine ice crystals (solid). In the model, the three states of water use the following icons.

Liquid - 

Solid - 

Gas - 

The gray arrows and the lines behind the water icons show the movement of water as it goes through the water cycle.

Go to the next page ⟶

1. Using the model, fill in the following chart.

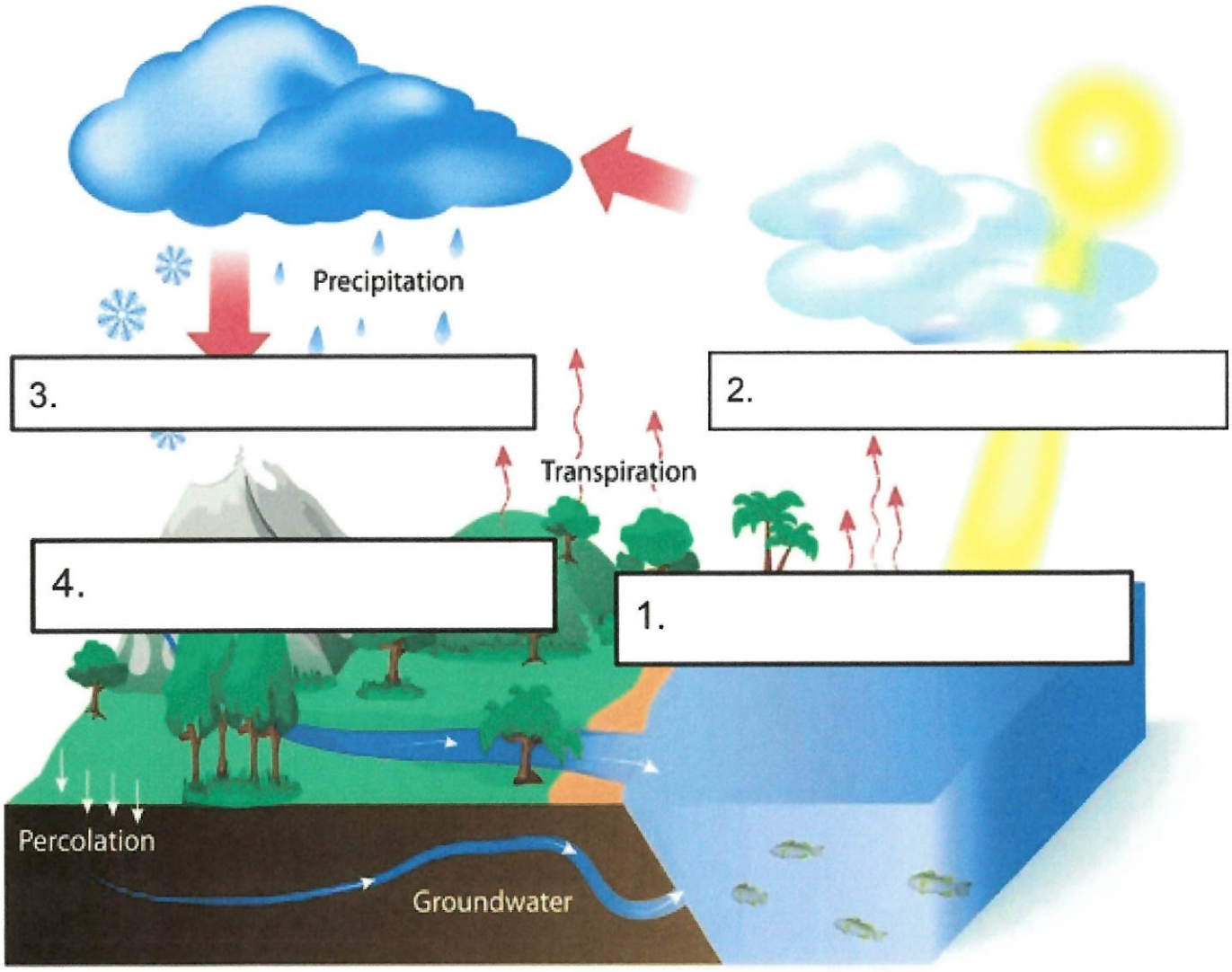
The Water Cycle: When is water a solid, liquid, or gas?	
State of Matter	**Describe one place on the model where you would find water in the state given.**
Solid (snow or ice)	
Liquid (rain or water)	
Gas (water vapor)	

Water can change from one state to another. This is why the water cycles throughout the Earth. The chart below gives the definitions for the changes.

State of Matter Change	Explanation	Example
freezing	When a liquid turns into a solid	Pond freezes to ice in the winter
melting	When a solid turns into a liquid	A frozen pond melts and turns into liquid water
condensation	When a gas turns into a liquid	Water vapor in air (can't see it) turns into a cloud (liquid water)
evaporation	When a liquid turns into a gas	Water water from a pond, lake, or ocean turns into a gas on a hot day

2. Take a look at the model on the next page. It also shows the water cycle. In the boxes provided on the model, write if freezing, melting, condensation, or evaporation is taking place. Each word will be used one time.

Go to the next page ⟶



Hints:

- Clouds are water droplets (liquid)
- #1 starts with the lake and goes to the air
- #2 starts in the air and ends in the clouds
- #3 starts as rain and ends as snow or frozen ice on the mountain
- #4 starts as snow on the mountain and ends in the stream

Name: _____

COMMUNITIES

1. We all live in communities which are places where we live, work, and play. What would be some fun activities to have in a community?

_____

_____

_____

2. Some communities are small and some are much larger than others. Check the boxes below with an X if you think these geographical features may have helped some communities grow.

	Located near a lake	
	Located in a desert	
	Located near a mountain	
	Located in a forest	
	Located by the ocean	

3. How can people in a community help each other?

4. People who live in large cities have several choices for transportation today. How have transportation changes affected people's lives?

5. In today's world we have many choices for communicating with others. How have communication changes affected people's lives?

Name

AMI PACKET #1: Five in a Row: Addition and Subtraction

- Partner A: Put a paperclip on two numbers in the grey rows. Cover the sum of those two numbers.
- Partner B: Move one of the paperclips, add the two numbers in the grey rows. Cover the sum of those two numbers.
- The first player to place five counters in a row wins.
- Play three times. On the third game, color in the spaces. Turn this recording sheet in at school.

704	669	621	442	784
497	695	323	956	44
586	413	784	576	614
297	386	378	867	532
873	99	134	531	665
263	100	352	65	10
34	432	604	313	521