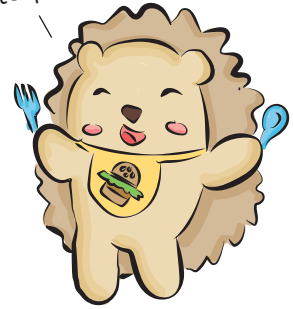


Print one set of this PDF per group of students playing the game. To heighten engagement, print one die per student (found in the Student PDFs).

Play a game called Pass the Carbon!

You will become a species in an ecosystem! Toss a ball to represent carbon moving around the ecosystem between you and other species. You will either receive or pass on the carbon by catching or tossing the carbon ball.

I'm ready to play!

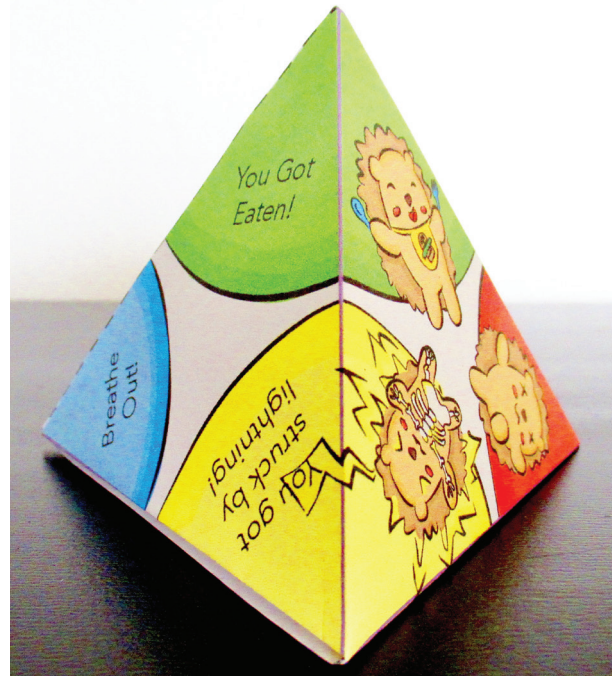


What you'll need:

To play this game you will need a ball to represent carbon, the origami pyramid to roll as a die, and a group of 4-5 students.

What you'll do:

1. Choose a role to play in the ecosystem (rabbit, grass, beetle, blueberry, or coyote). Draw a **Plant or Animal Card** to guide your game actions.
2. Grass gets to hold the ball first and roll the action die to start the game.
3. Follow the prompt at the top of the pyramid after rolling it and pass the carbon ball to the appropriate student (rabbit, grass, beetle, blueberry, or coyote).
4. That student rolls the pyramid to see what to do next. Continue playing and passing the carbon!



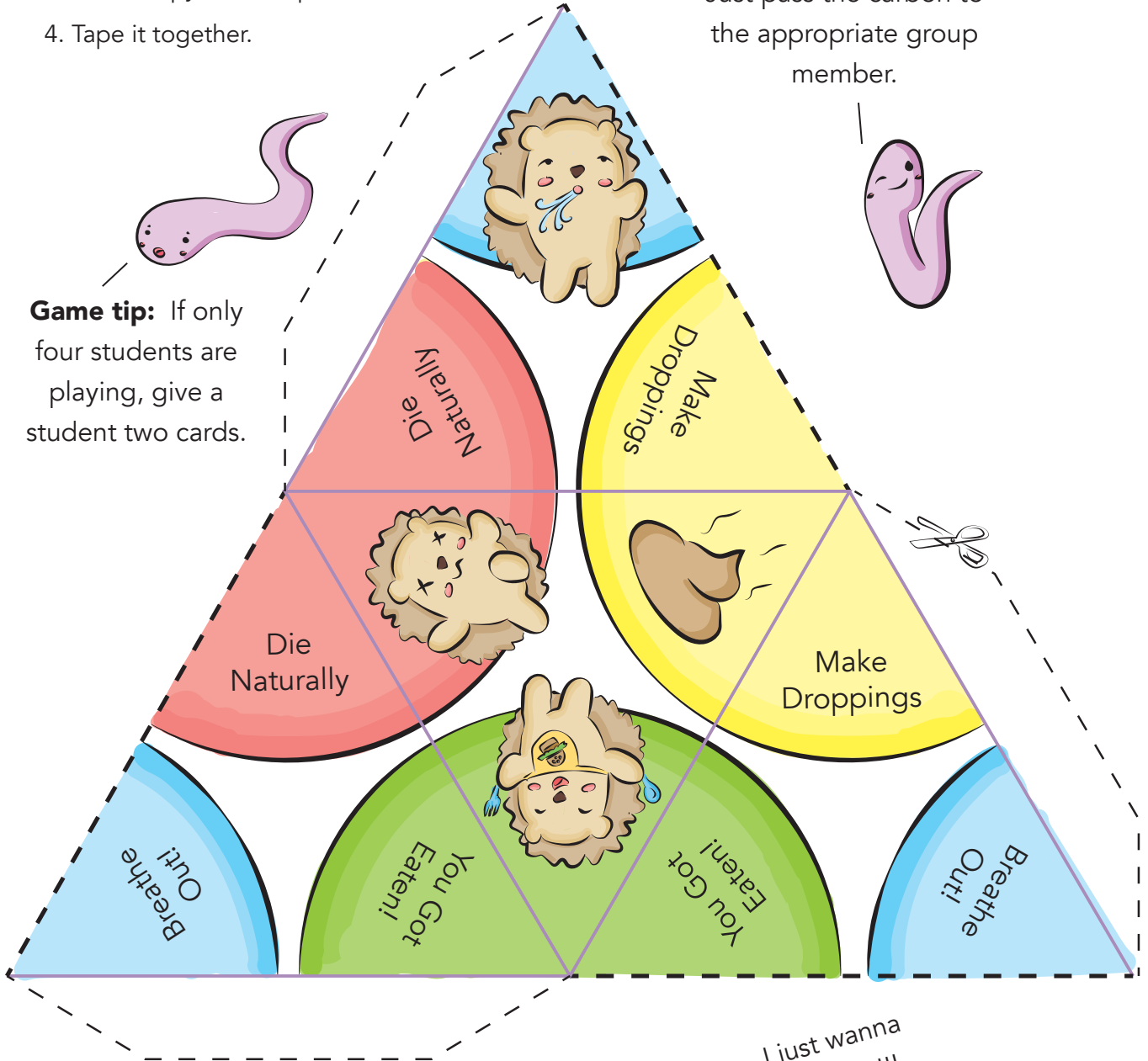
Model the carbon cycle by playing **Pass the Carbon**.

Make the Pyramid!

1. Cut along the dotted lines.
2. Fold along the solid purple lines.
3. Fold the pyramid as pictured.
4. Tape it together.

Game tip: You are not "out" if the pyramid says that you die or get eaten. Just pass the carbon to the appropriate group member.

Game tip: If only four students are playing, give a student two cards.



Game tip: You can reference your **Plant and Animal Cards** to help you know where to pass the carbon.

I just wanna wiggle!!!



Rabbit

You got eaten! Your carbon-rich matter is eaten by kit fox. **Toss the carbon ball to kit fox.** Let kit fox roll the pyramid.

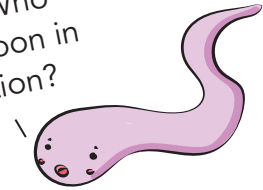
Make droppings: You make carbon-rich droppings. Beetle and bacteria break it down and give nutrients back to plant. **Toss the ball to beetle, then to bacteria, then to plant.** Let bacteria roll the die.

Breathe out: You exhale carbon dioxide. Your carbon is used by plants. **Toss the carbon ball to blueberry bush.** Give the pyramid to blueberry bush to roll.

Die naturally: You die of old age. Beetle breaks you down and eats your carbon. **Toss the carbon ball to beetle.** Give the pyramid to beetle to roll for the next turn.



Struck by lightning! Who gets the carbon in that situation?



Kit Fox

You got eaten! Your carbon-rich matter is eaten by something bigger than you. **Set the carbon ball in the middle of your circle (the environment).** Plant will roll the die.

Make droppings: You make carbon-rich droppings. Beetle and bacteria break the droppings down and give nutrients to plant. **Toss the ball to beetle, then to bacteria, then to plant.** Let bacteria roll next.

Breathe out: You exhale carbon dioxide. Your carbon is used by plants. **Toss the carbon ball to blueberry bush.** Let blueberry bush roll the pyramid next.

Die naturally: You die of old age. Beetle breaks you down and eats your carbon. **Toss the carbon ball and pyramid to beetle.**

Blueberry Bush

You got eaten! You are eaten by rabbit or kit fox. You choose! They consume your carbon when they eat your fruit or leaves. Toss the carbon ball and the pyramid.

Make droppings: Dead leaves and spoiled fruit drop to the ground. These carbon-rich droppings are food for beetles and bacteria. **Toss the ball to beetle, then to bacteria.** Let bacteria roll the pyramid.

Breathe out: You do not pass along carbon as waste gas! Instead say "Oxygen!," and all the animals say, "Thank you!" Then roll the die again.

Die naturally: You dry out and die. Beetle breaks you down and eats your carbon. **Toss the carbon ball and the pyramid to beetle.**

Bacteria

You got eaten! You are eaten by beetle but you can survive harsh stomach conditions. **You just keep doing what you like to do. Roll again.**

Make droppings: Your waste products contain carbon and can be used by plants to grow strong and healthy. **Exhale and pass the carbon ball and the pyramid to blueberry bush.**

Breathe out: You release carbon dioxide gas as waste into the atmosphere. **Exhale and pass the carbon and the pyramid to blueberry bush.**

Die naturally: Your life cycle ends. Other bacteria break you down for plants. **Toss the carbon ball and the pyramid to blueberry bush.**

Beetle

You got eaten! Your carbon-rich matter is eaten by an animal. **Toss the carbon ball and the action die to kit fox or rabbit.**

Make droppings: You make carbon-rich droppings. Bacteria breaks you down and gives your nutrients back to plants. **Toss the ball to bacteria and then to blueberry bush. Let bacteria roll the pyramid.**

Breathe out: You exhale carbon dioxide. Your carbon dioxide is used by plants. **Toss the carbon ball and the pyramid to blueberry bush.**

Die naturally: You die of old age. Bacteria breaks you down and eats your carbon. Make an "I'm dying!" face. **Toss the carbon ball and the pyramid to bacteria and then to blueberry bush. Let bacteria roll the pyramid for blueberry bush.**

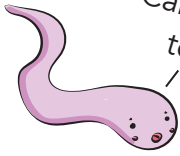


Plant and Animal Cards

Choose your role in the ecosystem!

For each round you can be one of these species. Cut out your card and keep it in front of you for others to see. You can even wear your card on a headband (large rubberband) or tape it to your shirt so everyone in your ecosystem knows who you are.

Looks fun.
Can I play too?



Sure! Just act out the game actions!

