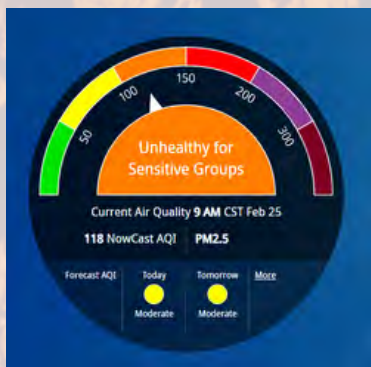


Wildfire Smoke Response Guide for Preschools and Daycares



Outdoor Air Quality Guidelines for Children



Health Impacts of Wildfire Smoke



How to Protect Children Indoors



Educational Activities and Resources



DEPARTMENT OF
**PUBLIC HEALTH &
HUMAN SERVICES**

Montana DPHHS Air Quality and Health
<https://dphhs.mt.gov/airquality/>
AirQuality@mt.gov

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“Any kind of air pollution can be dangerous to young children, but wildfire smoke is about 10 times as toxic for children compared to air pollution from burning fossil fuels.”

**~Lisa Patel,
clinical associate
professor of pediatrics at
Stanford Children’s Health**



Why a resource guide for preschools and daycares?

Wildfires are a natural occurrence in Montana that can have major health impacts on residents due to the harmful effects of wildfire smoke. With changes in weather patterns and changes in wildfire management practices, wildfires and wildfire smoke are now common events across the West. Wildfire smoke contains a slew of harmful particulate matter (PM), gases, and chemicals. These particles are especially harmful to one’s health as the particles are so small they can travel into the bloodstream when inhaled, impacting other parts of the body than the lungs. Everyone is impacted when exposed to wildfire smoke, but sensitive populations may experience health impacts sooner when exposed to lower concentrations of wildfire smoke.

One of population groups most vulnerable to the short-term and long-term health effects of wildfire smoke is children. This guide is designed to make you aware of the outdoor activity guidelines for children and empower you to protect your indoor air.

How can I help spread the word?

Although this toolkit is tailored to preschools and daycares, please share this information with families. As the harmful effects associated with wildfire smoke become more evident, we appreciate your assistance informing the public about these concerns and how to protect those they love.



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WHAT TO KNOW ABOUT WILDFIRE SMOKE AND YOUNG CHILDREN



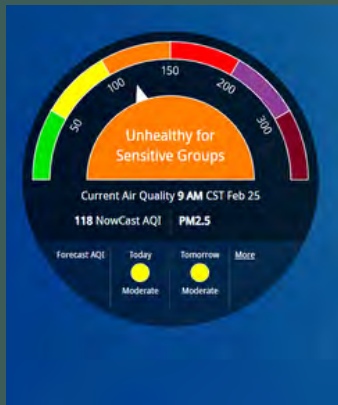
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Health Risks of Wildfire Smoke are Greater in Children

Wildfire smoke is more dangerous to children because their lungs are still developing, they breathe more quickly, and generally, spend more time outdoors.

In addition, children may have an underlying chronic disease that hasn't been diagnosed yet.



Limit Time Spent Outdoors When the Air Quality Index Exceeds 100

The EPA Air Quality Activity Guidelines recommend that young children are not outside longer than 15-minute intervals during a smoke event. Use a local air quality monitoring site to know when the air quality improves.



Protect Your Indoor Air

Studies show that indoor air can become as unhealthy as outdoor air in a wildfire smoke event. Keep doors and windows closed and use a HEPA air cleaner or DIY box fan filter in the room where your children spend the most time. For more tips, visit dphhs.mt.gov/AirQuality/SmokefromFires.



Other Steps You Can Take During a Smoke Event

- Drink plenty of water. Keeping hydrated helps to remove wildfire smoke toxins from the blood.
- Encourage sleep. Place a HEPA air cleaner in the sleeping area, if possible.
- Serve fruits and leafy vegetables to help with inflammation.



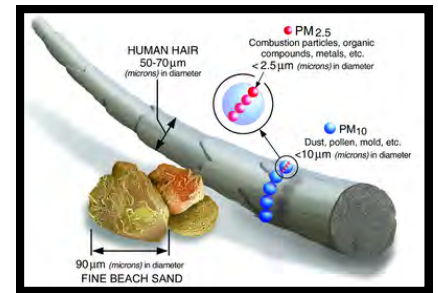
Wildfire Smoke & Your Health

Protecting Yourself Indoors

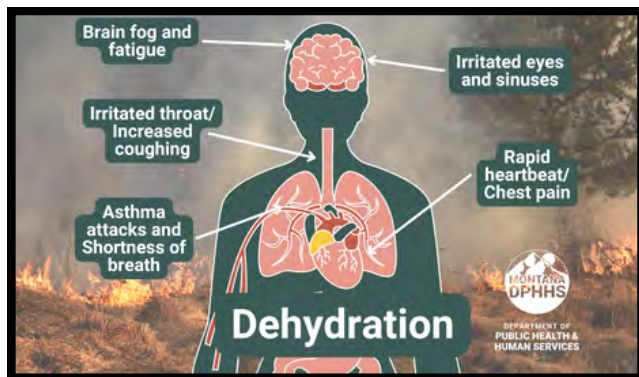


Why do we worry about indoor air and wildfire smoke?

Wildfire smoke contains particulate matter that is four times smaller and up to ten times more toxic than other pollutants. These tiny particles enter our homes, childcare and preschool buildings through open doors and windows, HVAC systems, and gaps in poorly sealed structures. They then travel into our lungs and in high quantities, can enter the bloodstream. This is harmful to all of us, but can be dangerous (and in some cases, deadly) to those with lung or heart conditions or those who are pregnant, children, or senior citizens.



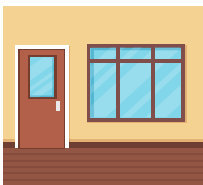
Symptoms of Smoke Exposure



Wildfire smoke exposure may increase the risk of respiratory infections like bronchitis and pneumonia. Persons with lung or heart conditions should keep their rescue medication stocked and available. Closely monitor those who are more vulnerable and seek medical attention if symptoms become more noticeable.

Protecting Your Indoor Air

During a smoke event, the air inside can become as unhealthy as the air outside. Follow local air quality monitoring and use the following strategies help protect the air in your childcare and preschool buildings when the air quality index becomes unhealthy levels for children. If a heat event accompanies a smoke event, prioritize cooling your facility over mitigating wildfire smoke, since the heat is a more immediate safety concern.



Keep doors and windows closed.



Avoid stovetop cooking, candle burning and smoking indoors.



Use a HEPA air purifier or a DIY filter.



Seal cracks in doors and windows.



Change A/C setting to recirculate.

For more information visit AirQuality.mt.gov.

| Outdoor Activity & Air Quality Guidelines for Schools and Child Care Facilities | | | | | |
|--|----------------|---|---|--|--|
| Health Effect Category | Good | Moderate | Unhealthy for sensitive groups* | Unhealthy | Very Unhealthy/ Hazardous |
| Visibility (miles) | 13+ | 9-13 | 5-9 | 2-5 | Less than 2 |
| Air Quality Index (AQI) | 0-50 | 51 - 100 | 101 - 150 | 151 - 200 | 201 + |
| Recess or Other Outdoor Activity (15-30 minutes) | No limitations | No limitations | Keep students with chronic lung or heart conditions indoors. Make indoor space available for all children to be active, especially young children. | Keep all students indoors and limit students to light or moderate activities. | Keep all students indoors and limit students to light activities. |
| Physical Education Class (1 hour) | No limitations | Monitor sensitive groups and limit their vigorous activities. | Keep students with chronic lung or heart conditions indoors. Limit these students to light activities. Make indoor space available for all students to be active, especially young children. If outdoors, limit students to light or moderate activities. | Conduct P.E. classes in an indoor environment with good air quality and limit students to light or moderate activities. | Conduct P.E. classes in an indoor environment with good air quality and limit students to light activities. |
| Athletic Events and Practices (2-4 hours) | No limitations | Monitor sensitive groups and limit their vigorous activities. | Students with chronic lung or heart conditions should abstain from outdoor practices and events based on the severity of their condition and sensitivity to smoke. Consider moving practice and events indoors. If events are not cancelled, increase rest periods and substitutions to allow for lower breathing rates. | Reschedule events or relocate to an area with good air quality. Conduct practices in an indoor environment with good air quality and limit students to light activities. | Reschedule/cancel events. Conduct practices in an indoor environment with good air quality and limit students to light activities. |
| Visit todaysair.mtdeq.us for local air quality conditions and more information. | | | | | |

Examples of Activities

Light Activities: Walking, stretching, playing board/card games, dancing slowly

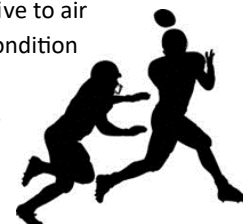
Moderate Activities: Yoga, gymnastics, shooting basketballs, skateboarding, weight training, hiking, biking, golfing

Vigorous Activities: Running/jogging, basketball, football, soccer, swimming, cheerleading, and wheeling your wheelchair

† Please note that the intensity of an activity can vary by person and ability.

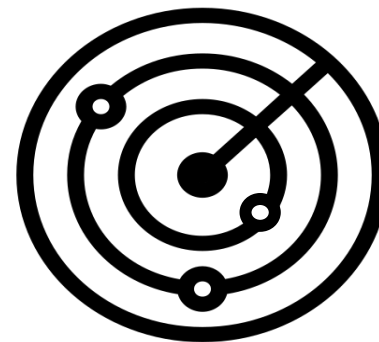
*For the purpose of this document, sensitive groups include:

- **Children (ages 0-17 years):** Children may be more sensitive to air pollution as their lungs are still developing and they may have an unknown underlying health condition.
- **People with chronic conditions:** People with chronic conditions, such as asthma or another respiratory disease, or cardiovascular disease, may be more sensitive to air pollution and should talk with their healthcare provider about managing their condition. People with chronic conditions should be medically managing their condition during air quality that is unhealthy for sensitive groups or worse. Students with asthma should be following their Asthma Action Plan in all conditions.
- **Pregnant women:** During pregnancy, changes to a woman's body may increase vulnerability to environmental exposures. Additionally, during critical windows of human development, a pregnant woman's prolonged exposure to wildfire smoke may harm the developing baby.
- **Older adults:** Older adults are at increased risk of health effects from short-term exposures to wildfire smoke because of their higher prevalence of pre-existing lung and heart diseases.



How to Use This Table and the Today's Air Website

- Start planning early. Well before your event, start monitoring the air quality by visiting the todaysair.mtdeq.us website.
 - Review statewide smoke forecasts on the DEQ website: deq.mt.gov/air/Programs/smokeforecasts.
 - If your area is not near an air monitor, follow directions below for using the visibility guidelines.
 - Make adjustments to your plans depending on the forecast and the health effect category.
- Continue to monitor the air quality and the forecast in your area.
 - Be sure to leave adequate time for decisions to be made before teams/participants begin travel.
 - Air quality can change rapidly. Regularly review the PM2.5 concentration levels before and throughout lengthy events to assess for deteriorating conditions.



How to Estimate Air Quality Based on Visibility:

1. Use pre-determined landmarks that were established on a clear day for distances (face away from the sun).
2. Determine the limit of your visible range by looking for targets at known distances (miles).
3. Use the visibility values in the table to determine the local wildfire smoke health effect category.

Items to Consider When Planning for Poor Air Quality During the School Year

- Is there an indoor/outdoor air quality section in the school or district wellness policy? If so, do you know where it is located?
- Which air quality monitor do you use or what geographic spot do you use for visibility guidelines? Does your school have its own air quality monitors?
- Who makes the decisions to hold, cancel, or reschedule outdoor events? What is the procedure for rescheduling events?
How do you communicate your decision with stakeholders? If participants are already traveling, how do you notify them?
- What do you do for recess and athletic practices on days with poor air quality?
- Has the school/district adopted a smoke readiness plan? What are the school/district plans to protect indoor air quality if poor outdoor air quality persists for a long period of time?
- Has the school inspected the air handling system and made necessary improvements to ensure ultimate efficiency?
- How do you document what happened during wildfire smoke or other air pollution events? What went well? What can be done better?

Protection from Particulate Matter

Wildfires, wood burning, and air stagnation increase the fine particulate matter (PM2.5/PM10) in the air we breathe. Fine particulate matter travels easily indoors, especially through doors, windows, and small openings. Over time, concentrations of fine particulate matter indoors can approach the level of concentration outdoors. Schools should use MERV 13 rated filters or greater in their HVAC systems if the system is capable. Supplemental use of properly sized HEPA air purifiers have also been shown to improve indoor air quality by reducing particulate matter and chemicals found in smoke.

Cloth face coverings and dust masks offer little protection against harmful air pollutants in wildfire smoke because these coverings do not capture most small particles in smoke. Anyone thinking about wearing an N95 mask or respirator should consult their physician prior to doing so. Individuals experiencing symptoms such as wheezing, shortness of breath, chest pain, headache, and dizziness should be seen by a medical provider. Schools should be aware of students with asthma and other chronic conditions and consider accommodations for these students to minimize their exposure to wildfire smoke.

Visit AirQuality.mt.gov for more information on particulate matter and how to protect your health during poor air quality conditions.

DPHHS complies with applicable Federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex.

ATENCIÓN: si habla español, tiene a su disposición servicios gratuitos de asistencia lingüística. Llame al 1-406-444-1386 (TTY: 1-800-833-8503).

ACHTUNG: Wenn Sie Deutsch sprechen, stehen Ihnen kostenlos sprachliche Hilfsdienstleistungen zur Verfügung. Rufnummer: 1-406-444-1386 (TTY: 1-800-833-8503).

Guía informativa sobre la calidad del aire en Montana para la contaminación por partículas

Los gases de los escapes de los vehículos, las emisiones de las estufas a leña, las emisiones industriales, el humo de los incendios forestales, el polvo arrastrado por el viento y otras fuentes contienen partículas finas de 2.5 micrómetros de diámetro o menos (PM2.5) que pueden ser peligrosas para la salud. El índice de calidad del aire (ICA) establece seis categorías para proporcionar información sobre el nivel de calidad del aire y los problemas de salud:

Verifique las condiciones actuales y previstas en [AirNow.gov](https://airnow.gov).

| Índice de calidad del aire | ¿Qué debo hacer? |
|---|--|
| Buena 0–50 |  Es un excelente día para hacer ejercicio al aire libre y un buen momento para elaborar un plan si se prevé un empeoramiento de la calidad del aire. |
| Moderada 51–100 |  Algunas personas son particularmente sensibles a los niveles más bajos de contaminación por partículas, por lo que deben reducir la exposición a estas. Por ejemplo, deben reducir el tiempo que pasan en el exterior y evitar realizar actividades extenuantes al aire libre. Todos los grupos sensibles deben estar atentos a los síntomas. |
| Dañina para grupos sensibles 101–150 |  Los grupos sensibles deben tomar medidas para reducir la exposición. Deben reducir el tiempo que pasan en el exterior, evitar realizar actividades extenuantes al aire libre y seguir los consejos para respirar un aire más limpio en interiores. Todos deben estar atentos a los síntomas, ya que indican si es necesario reducir la exposición. |
| Dañina 151–200 |  Todos deberían reducir la exposición. Deben reducir el tiempo que pasan en el exterior, evitar realizar actividades extenuantes al aire libre y seguir los consejos para respirar un aire más limpio en interiores. |
| Muy dañina 201–300 |  Todos deberían reducir la exposición. Deben quedarse en casa y filtrar el aire interior para mantenerlo más limpio. Vayan a otro sitio para respirar un aire más puro, si es necesario. |
| Peligrosa >300 |  Todos deberían reducir la exposición. Deben quedarse en casa y filtrar el aire interior para mantenerlo más limpio. Vayan a otro sitio para respirar un aire más puro, si es necesario. |

Estos son los síntomas:

Ardor en los ojos

Tos

Irritación de la garganta y la nariz

Dolores de cabeza

Cansancio

Sibilancia y dificultad para respirar

Frecuencia cardíaca irregular

Dolor en el pecho



Si los síntomas se agravan, acuda a un médico. Una exposición elevada a las PM2.5 puede derivar en hospitalizaciones y aumentar el riesgo de muerte.

Consulte el reverso para conocer las medidas que debe tomar para reducir la exposición y acceder a una lista de grupos sensibles con mayor riesgo.

Para obtener información sobre el humo de los incendios forestales y las medidas para proteger la salud, visite <https://dphhs.mt.gov/airquality/SmokefromFires>

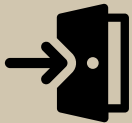
Medidas para reducir la exposición



Limite la duración y la intensidad de las actividades físicas que realiza al aire libre.



Quédese en casa para respirar un aire interior más limpio:



Cierre las ventanas y las puertas, a menos que haga demasiado calor para mantener una temperatura segura.



No contribuya a la contaminación del aire interior encendiendo velas o fumando cigarrillos.



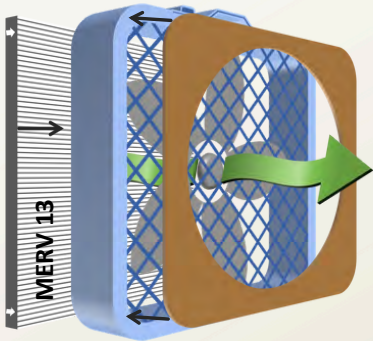
Filtre el aire interior mediante un sistema de HVAC (por su sigla en inglés; calefacción, ventilación y aire acondicionado), un purificador de aire portátil con filtros HEPA (por su sigla en inglés; filtro de aire de partículas de alta eficiencia) o un filtro de ventilador hecho por usted.



Grupos sensibles con mayor riesgo

- » Personas con problemas de salud
 - » Enfermedades pulmonares, como el asma y la EPOC
 - » Enfermedades cardíacas
 - » Enfermedades respiratorias
 - » Diabetes
- » Personas de 18 años o menos, o mayores de 65
- » Embarazadas
- » Trabajadores al aire libre
- » Personas con bajos ingresos

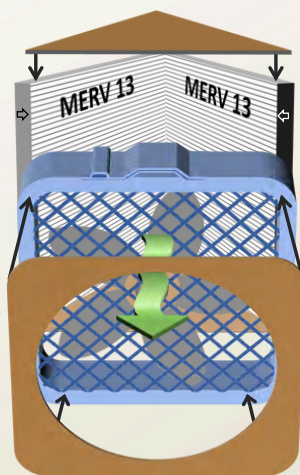
Diseños de Purificador de Aire Casero: Más allá de lo Básico



Bueno

Suministros básicos:

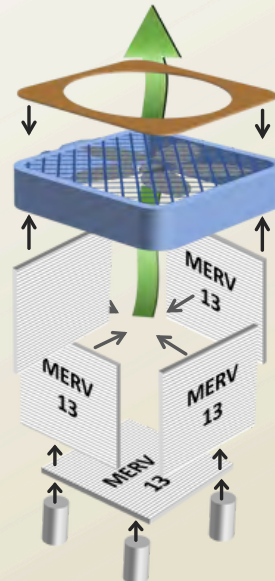
- Ventilador de caja de 20" x 20"
- Filtro de aire MERV 13 de 20" x 20" x 1" o 4"
- Cubierta de cartón de 20" x 20" (recortar al tamaño de las aspas del ventilador)
- Abrazaderas, cinta adhesiva o cuerdas elásticas



Mejor

Suministros adicionales:

- Dos -filtros de aire MERV 13
- Recorte triangular de cartón para la base en la parte superior



Óptimo

Suministros adicionales:

- Cuatro o cinco -filtros de aire MERV 13
- Si se usa un diseño de cinco filtros, utilice soportes para las patas (por ejemplo, bloques) para permitir el flujo de aire a través de la parte inferior

Maneras de Mejorar la Eficacia:

- Agregar una cubierta de cartón (mejora sin costo)
- Usar filtros más gruesos (filtros MERV 13 de 4" en lugar de 1")
- Usar varios filtros (de 2 a 5 diseños de filtro)

Recordatorios clave:

- Usar solo ventiladores certificados con la marca UL o ETL (modelo 2012 o más nuevo)
- Tener filtros de repuesto disponibles
- Cambiar los filtros cuando estén sucios

CHILDREN MOST VULNERABLE TO WILDFIRE SMOKE



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CHILDREN AGED 0-5 YEARS



Wildfire is more dangerous to children because their lungs are still developing, they breathe more quickly, and spend more time outdoors.

In addition, children may have a chronic disease that has not been identified yet.

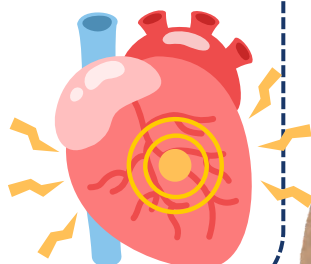
CHILDREN WITH ASTHMA

Wildfire smoke increases asthma symptoms like difficulty breathing, wheezing, and coughing. This may cause more reliance on rescue inhalers and possible emergency room visits.



CHILDREN WITH HEART CONDITIONS

Wildfire smoke exposure is linked to chest pain, heart palpitations, and emergency room visits.



CHILDREN WITH OTHER LUNG ISSUES

Wildfire smoke exposure increases symptoms like shortness of breath, chest tightness, and fatigue or dizziness.



CHILDREN WITH DIABETES

Wildfire smoke exposure increases dehydration and has been associated with an increase in symptoms of diabetes.



CHILDREN WHO ARE MORE ACTIVE

Increased rate of breathing exposes lungs to increased levels of wildfire smoke, leading to inflammation, coughing, shortness of breath, and susceptibility to respiratory illness.



For more information, visit [AirQuality.mt.gov](https://airquality.mt.gov)

Educational Activities and Resources



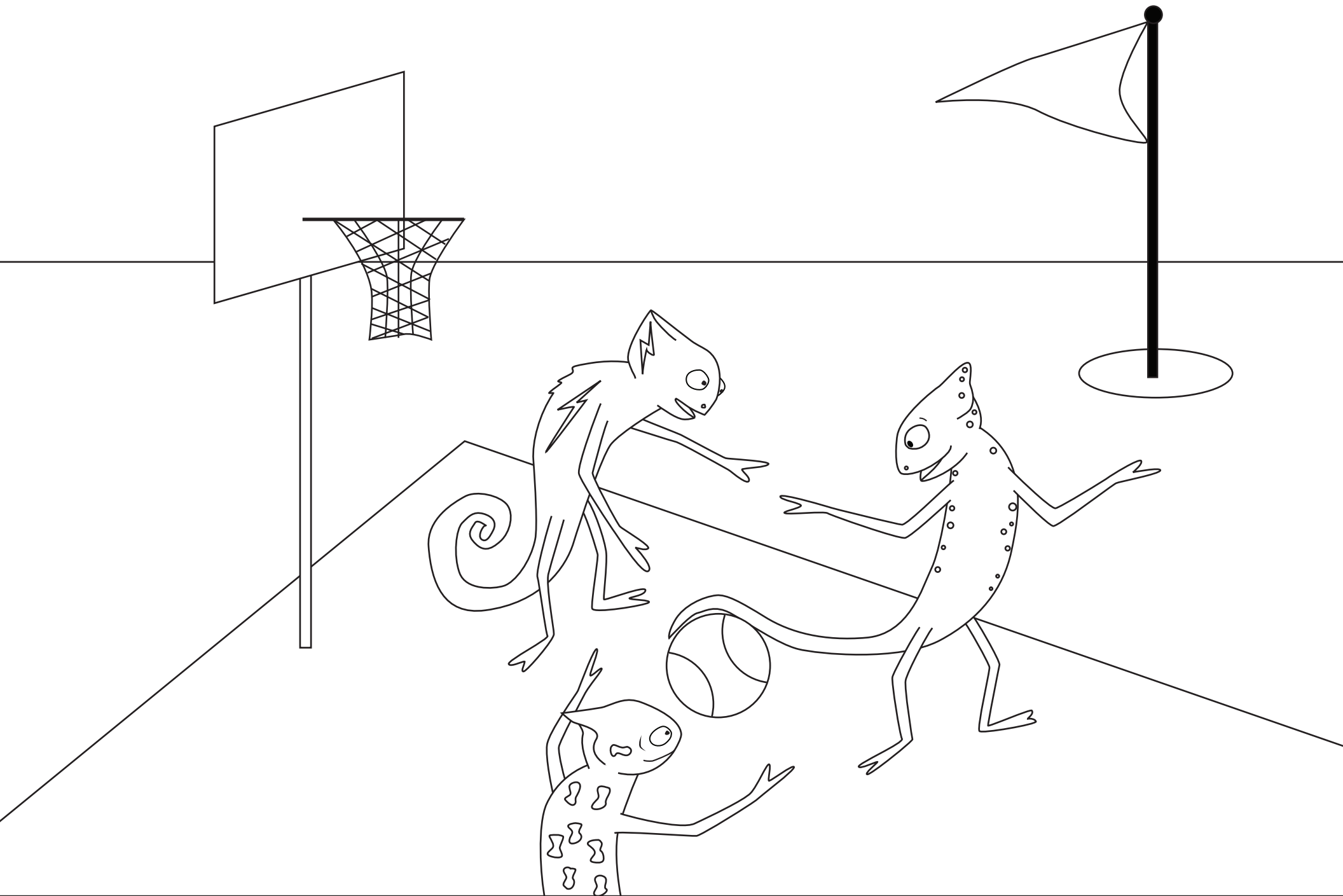
Summary

This book was developed by the EPA to introduce kids to the concept of air quality levels and the air quality flag program. It explains that sometimes the air can contain smoke or other things that affect our breathing, that some people are more sensitive than others, and that there are levels of risk – from normal through hazardous. It shows children how to protect their lungs by playing inside during poor air quality and using air filters, while encouraging kindness to children who are sensitive to poor air quality. It focuses on what we can do to stay healthy and keep each other well. Accompanying resources include an educational game and coloring pages.

The digital book is included in this response guide or available online:
<https://www.airnow.gov/education/why-is-coco-red/>

If you would like a set of air quality flags for your daycare or preschool, contact the Montana Health Professionals for a Healthy Climate website:
<https://www.montanahphc.org/air-quality-flags.html>
Phone: (406) 763-1006

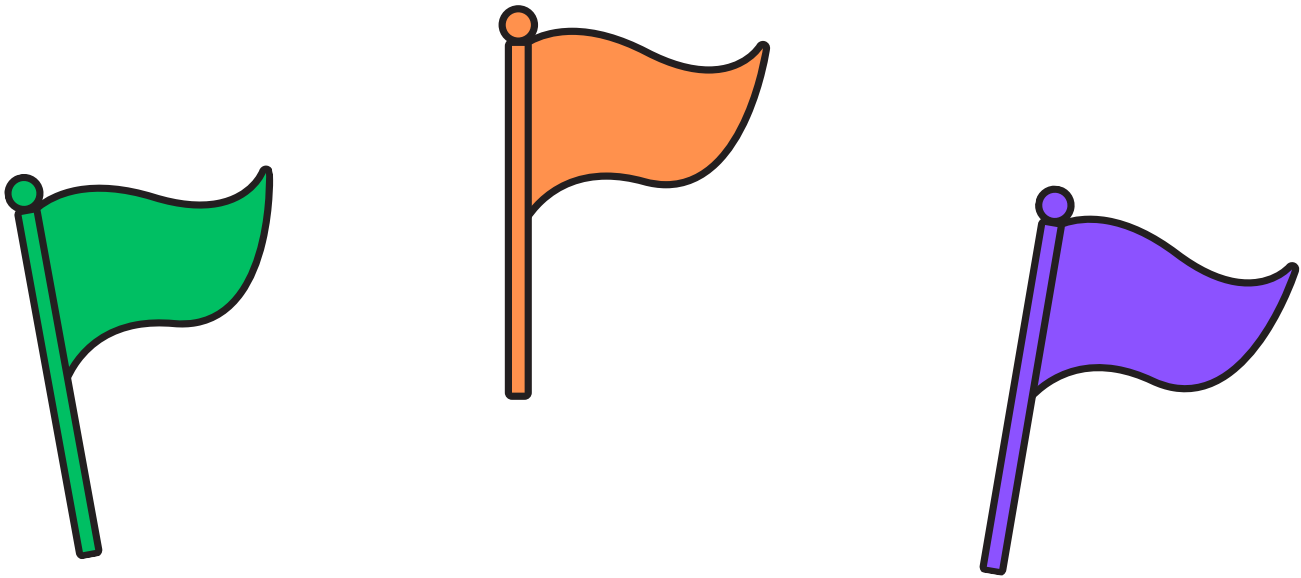




Exercise is good for you! Remember to take more breaks if the air outside is unhealthy.
Check the air quality color at [airnow.gov](https://www.airnow.gov)

Activity

Green light, orange light, purple light



This activity is connected to the air quality levels and can be used to complement the book, "Why is CoCo Red?"

1. Explain to the children that they are going to practice following the air quality guidelines through a game. Review what the colors indicate about air quality.
 - Green levels mean healthy air.
 - Orange levels mean the air is unhealthy for sensitive groups (this includes all children, as their lungs are still developing), and children should take it slow and not run or engage in strenuous activity outside.
 - Purple means (hazardous) levels, children should stay inside.
2. For this activity, you will need a small green flag, an orange flag, and a purple flag. (If you have a color-blind student, consider marking the flags with different letters, like a G, O, and P, so they can differentiate them).
3. Everyone lines up at one end of a space. When the Flag Raiser (child or staff) raises the green flag, everybody runs as fast as they can toward the finish line. When the orange flag is raised, runners must run in slow motion. If someone doesn't run in slow motion, they have to go back to the start! When the purple flag is raised, everyone must freeze. Alternate flags in no particular order.
4. First one to the finish line wins! (Or, to mix it up – last one to the finish line wins)!

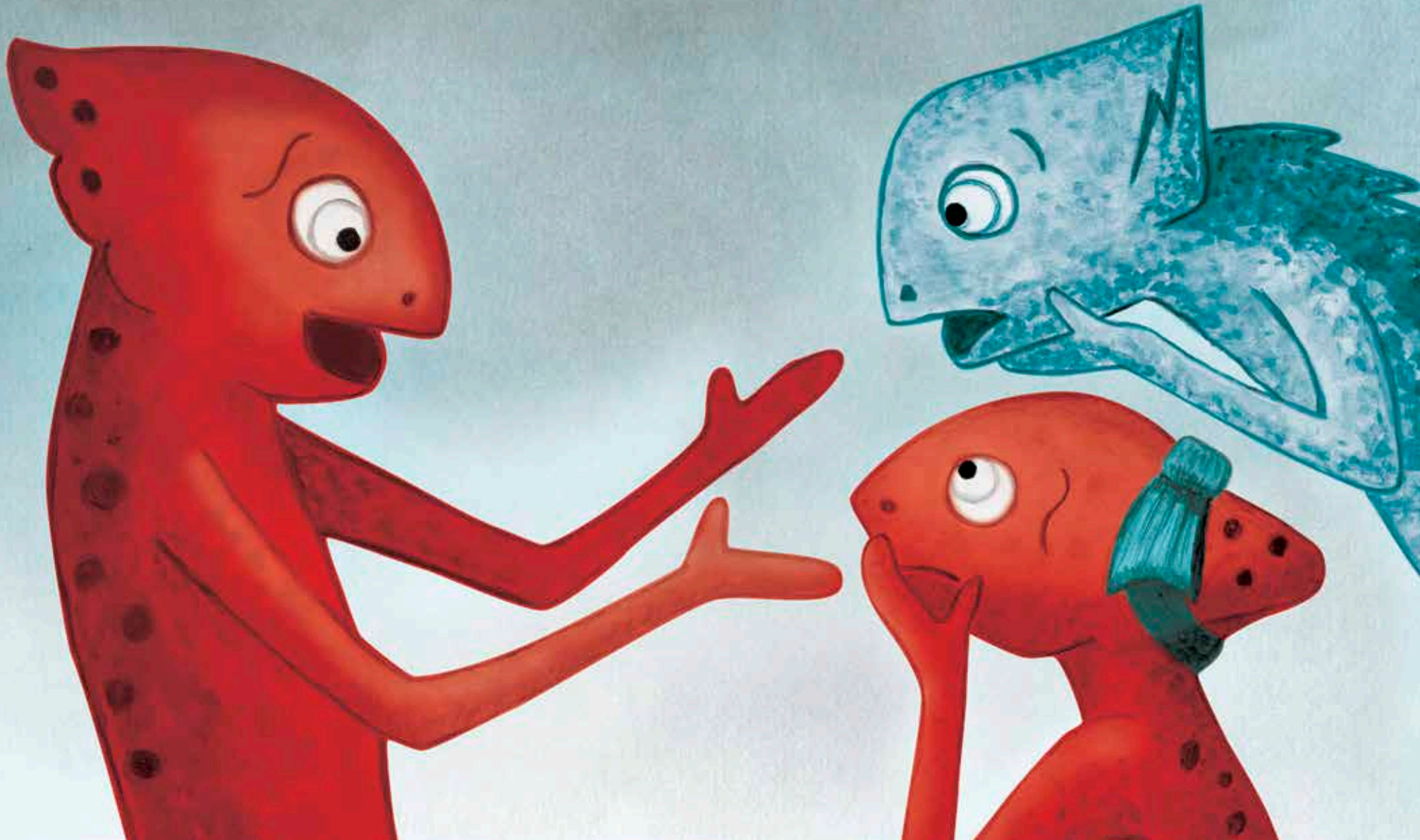
Materials

Flags - can be made of construction paper or inexpensive cotton material and a dowel.
Duct tape, chalk, or something to temporarily mark a finish line.
Optional - a small harmonica or whistle to call a "foul" when someone doesn't change movement speed quickly!

This activity is a lesson in the Environmental Health Education in a Box Curriculum developed by the Pediatric Environmental Health Specialty Units. For more information, visit the Montana Health Professionals for a Healthy Climate website.

Why Is Coco Red?

Coco and his friends solve this mystery as they learn about air quality.



Why Is Coco Red?

Coco and his friends learn about wildfire smoke and air quality.

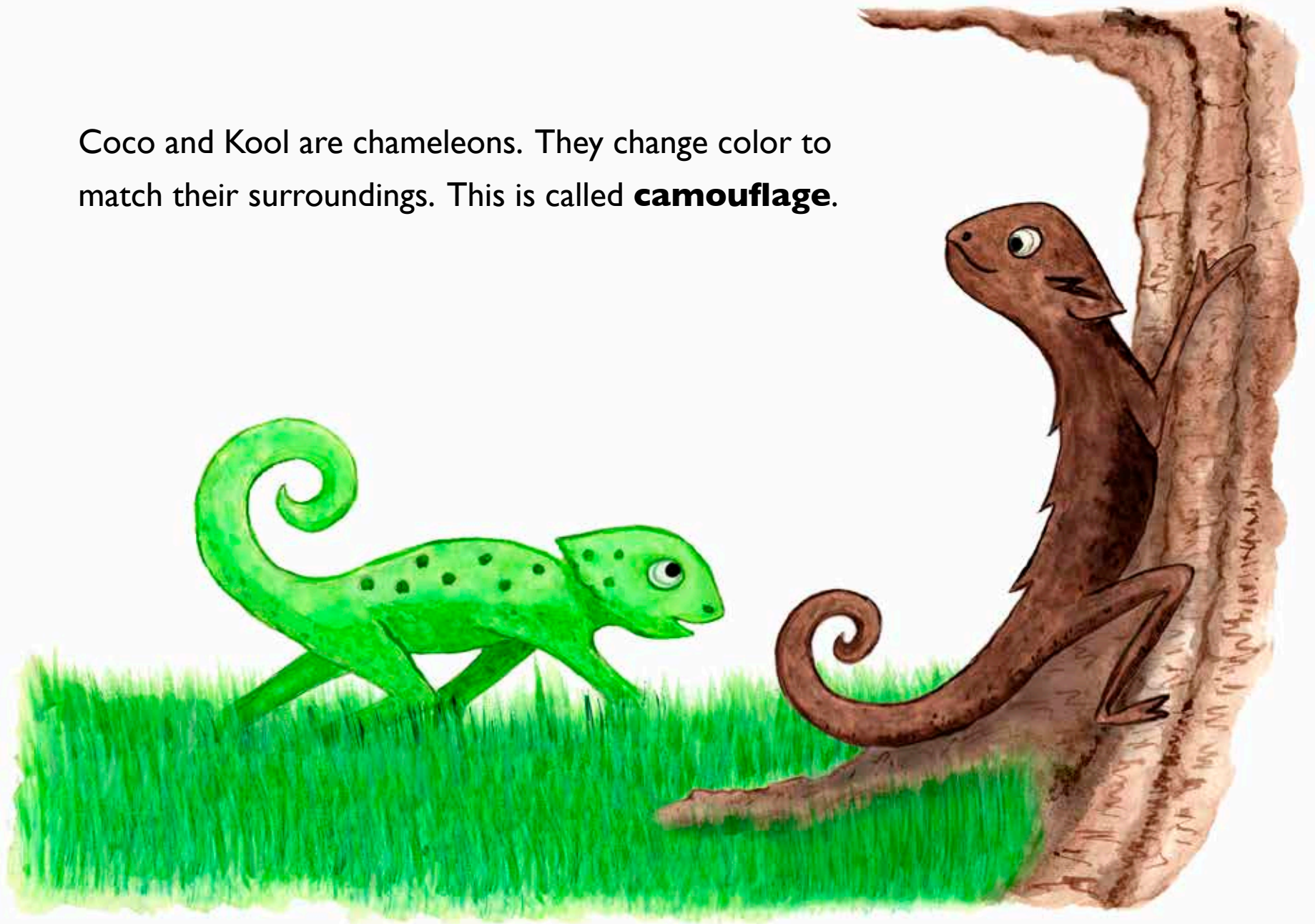
by

The United States Environmental Protection Agency

EPA Regions 8, 9, and 10 and
the Office of Air Quality Planning and Standards

Follow Coco and his friends on a new adventure as they learn about wildfire smoke and how it can affect air quality and health. This book is for all children, especially those with asthma, and their caretakers.

Coco and Kool are chameleons. They change color to match their surroundings. This is called **camouflage**.





Coco and Kool like to play outdoors.
If the air is clean, Coco is green.



But Coco is special. He changes color to match the air quality around him. So does his little sister, Cece.

“Coco, why am I turning yellow?”



Coco tells her, “You match the air quality chart! It tells us how clean or dirty the air is. When the number is more than 100, the air can be bad to breathe. We need to take it easier.”



“Yowza,” says Cece.



“I can keep track of the air quality too!” says Kool.

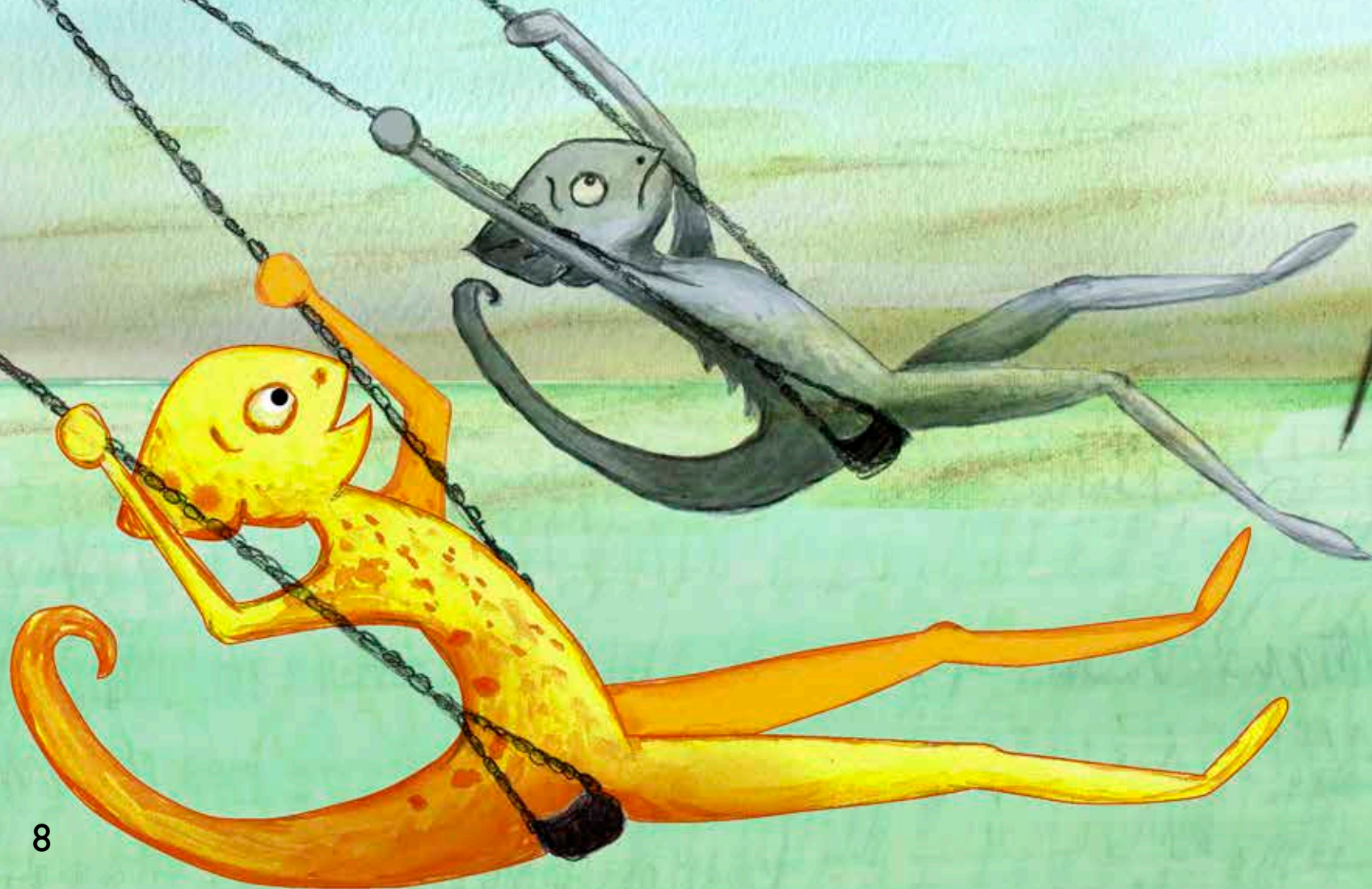
Their friend KC just moved
to the coast with his family.

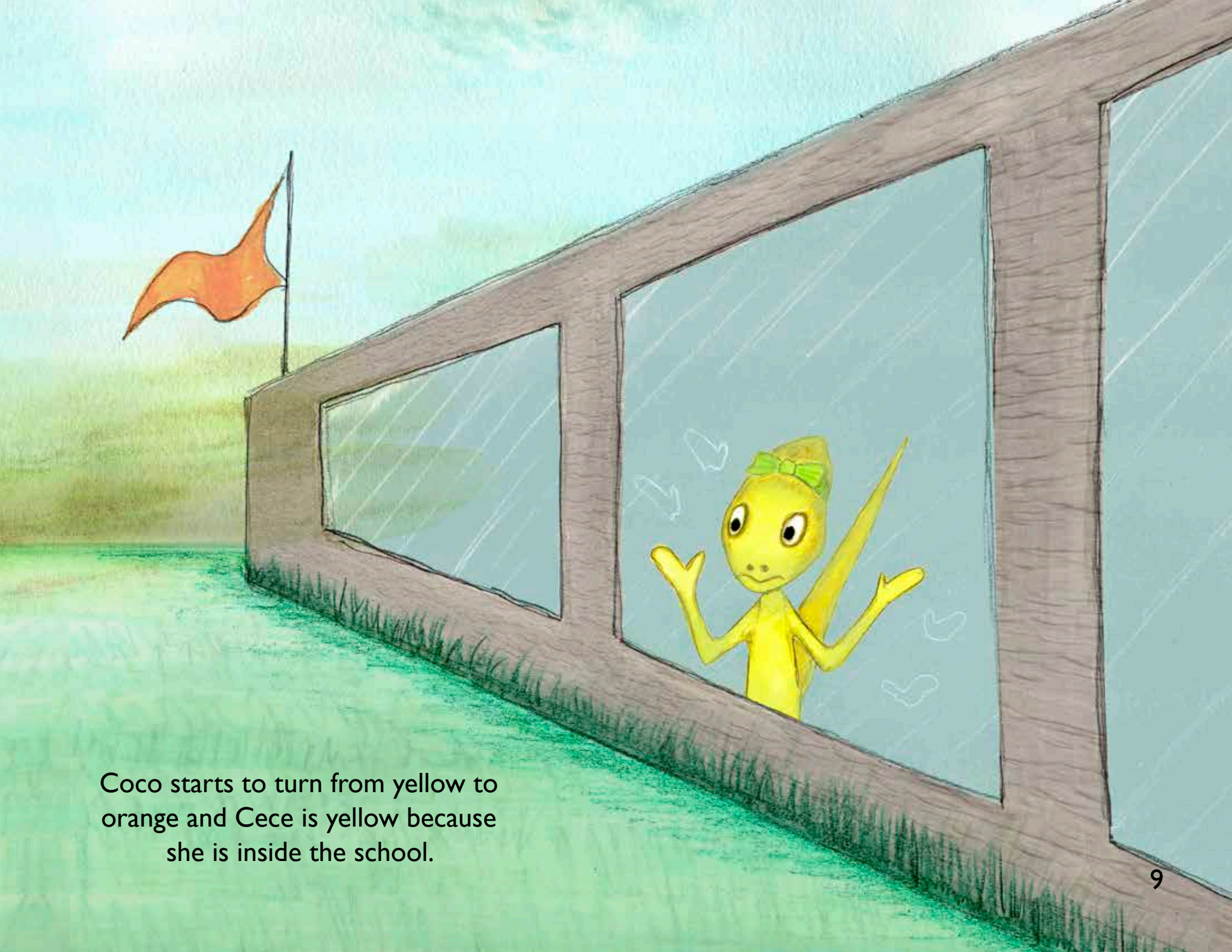


They miss him but talk
with him all the time.

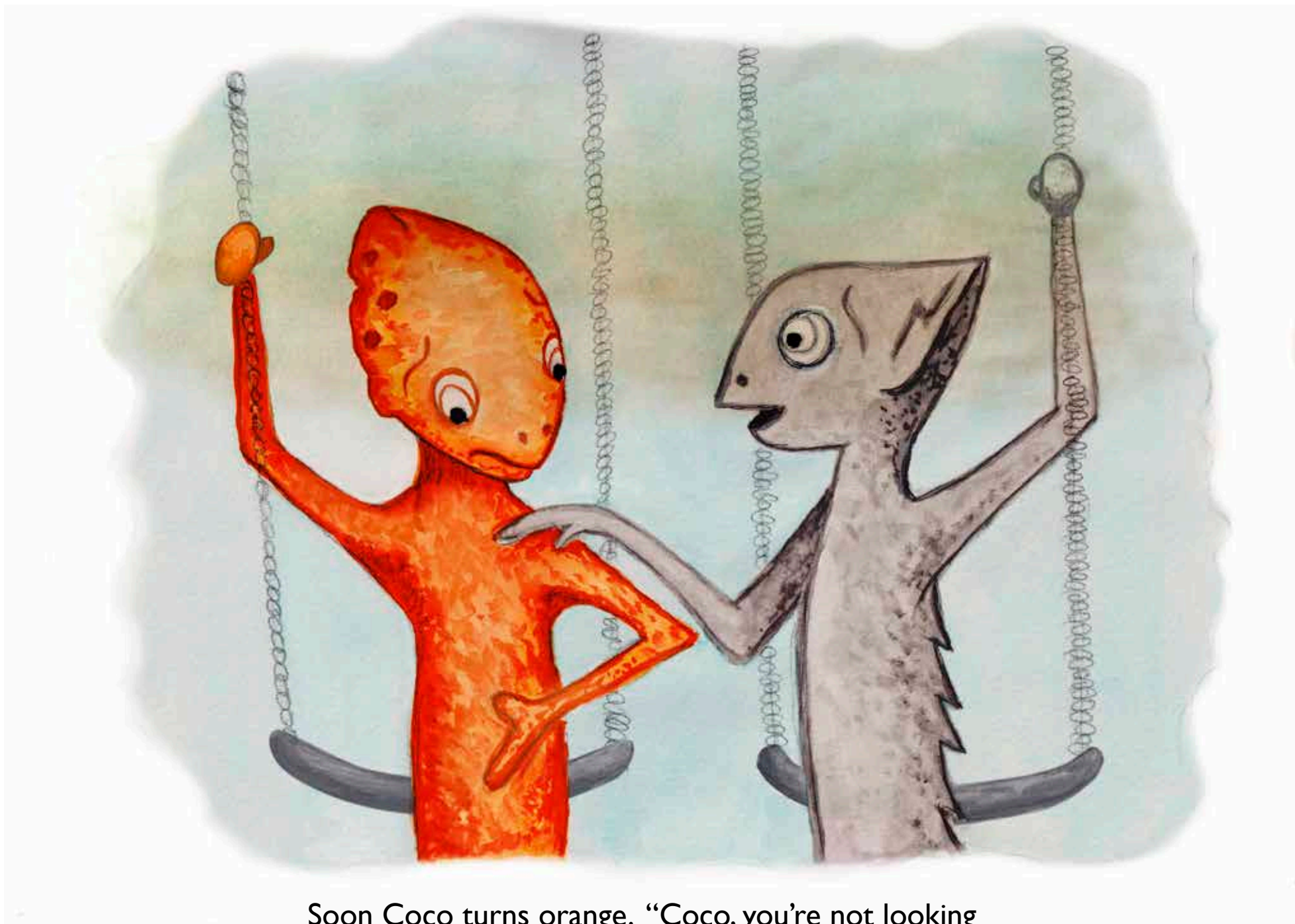


One day, Coco and Kool are playing
outside at Lizard Lick Elementary.
Kool smells smoke in the air.





Coco starts to turn from yellow to orange and Cece is yellow because she is inside the school.



Soon Coco turns orange. “Coco, you’re not looking so great. Let’s slow down,” says Kool.

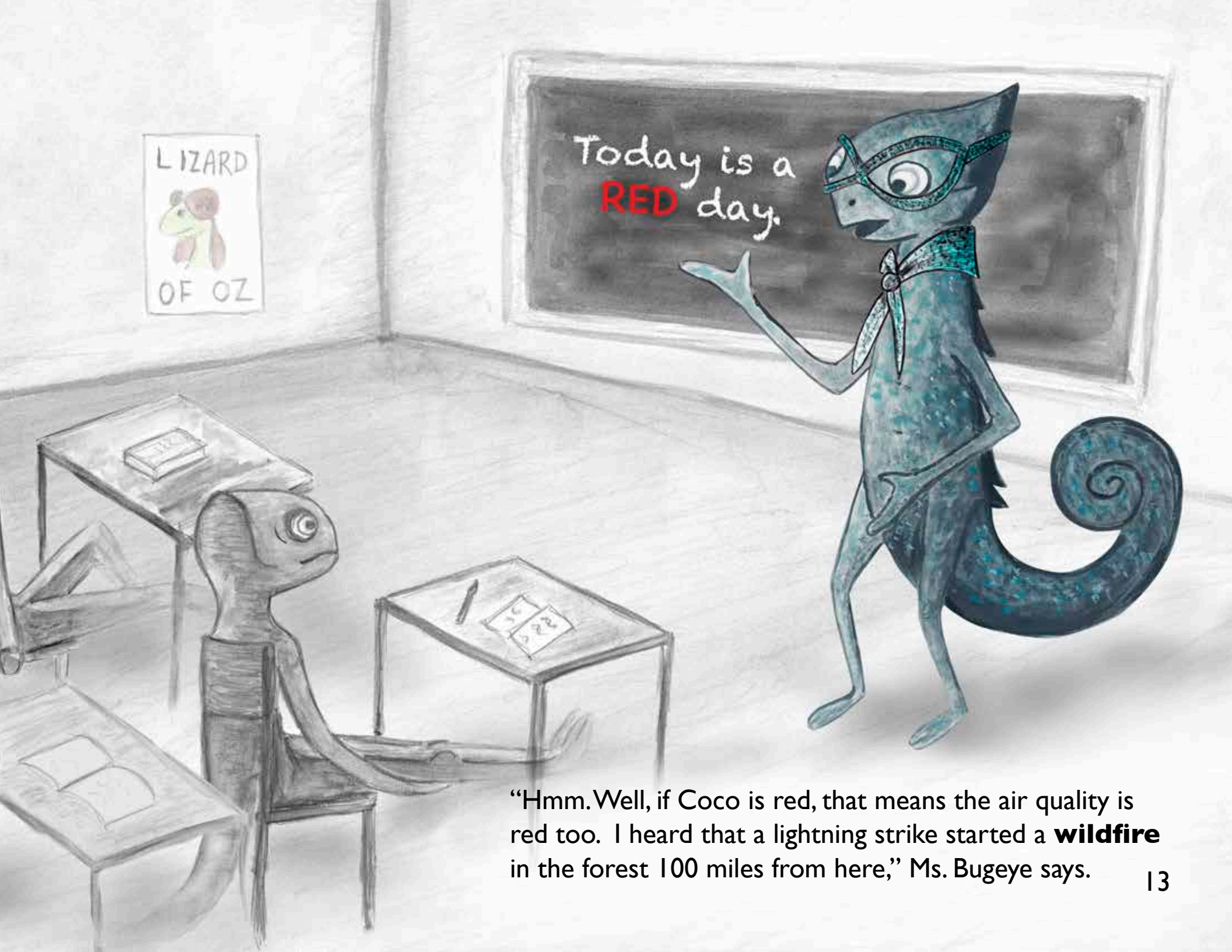


The next day, Coco is red.

In the classroom, the other chameleons turn gray when they sit at their desks. Except for Coco.

“Why is Coco red, Ms. Bugeye?” Kool asks their teacher.





"Hmm. Well, if Coco is red, that means the air quality is red too. I heard that a lightning strike started a **wildfire** in the forest 100 miles from here," Ms. Bugeye says.

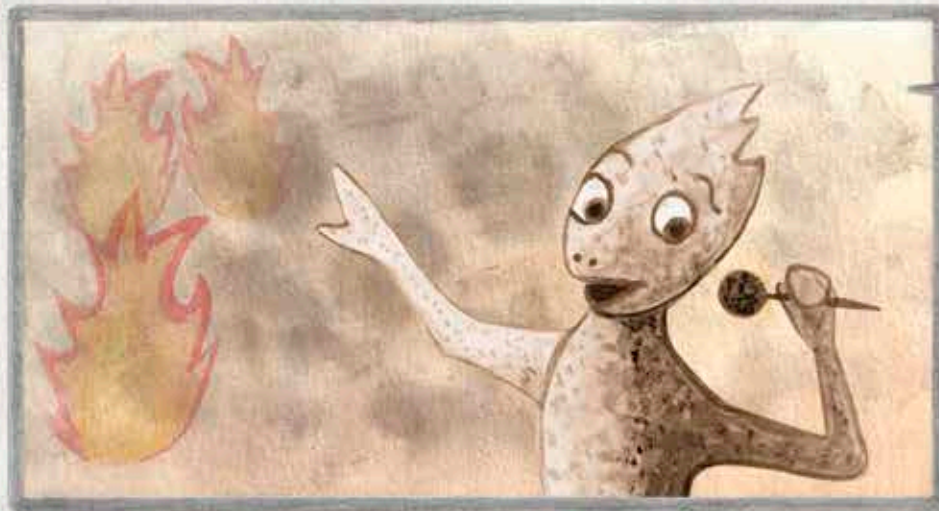
On the way home, Coco says, “Kool, my chest feels tight. I think my **asthma** is acting up.”



Asthma is a disease that can cause trouble breathing. Many children, teens and adults have **asthma**. An **asthma** attack is when your lungs aren't getting enough air. It can make you cough or wheeze, or make your chest hurt or feel tight. Smoke can trigger **asthma** attacks.



They decide to play inside,
where the air is cleaner.



Firefighters are working hard to control the fire.

The **air cleaners** in the house help with Coco's breathing. "I feel a little better now," he says.



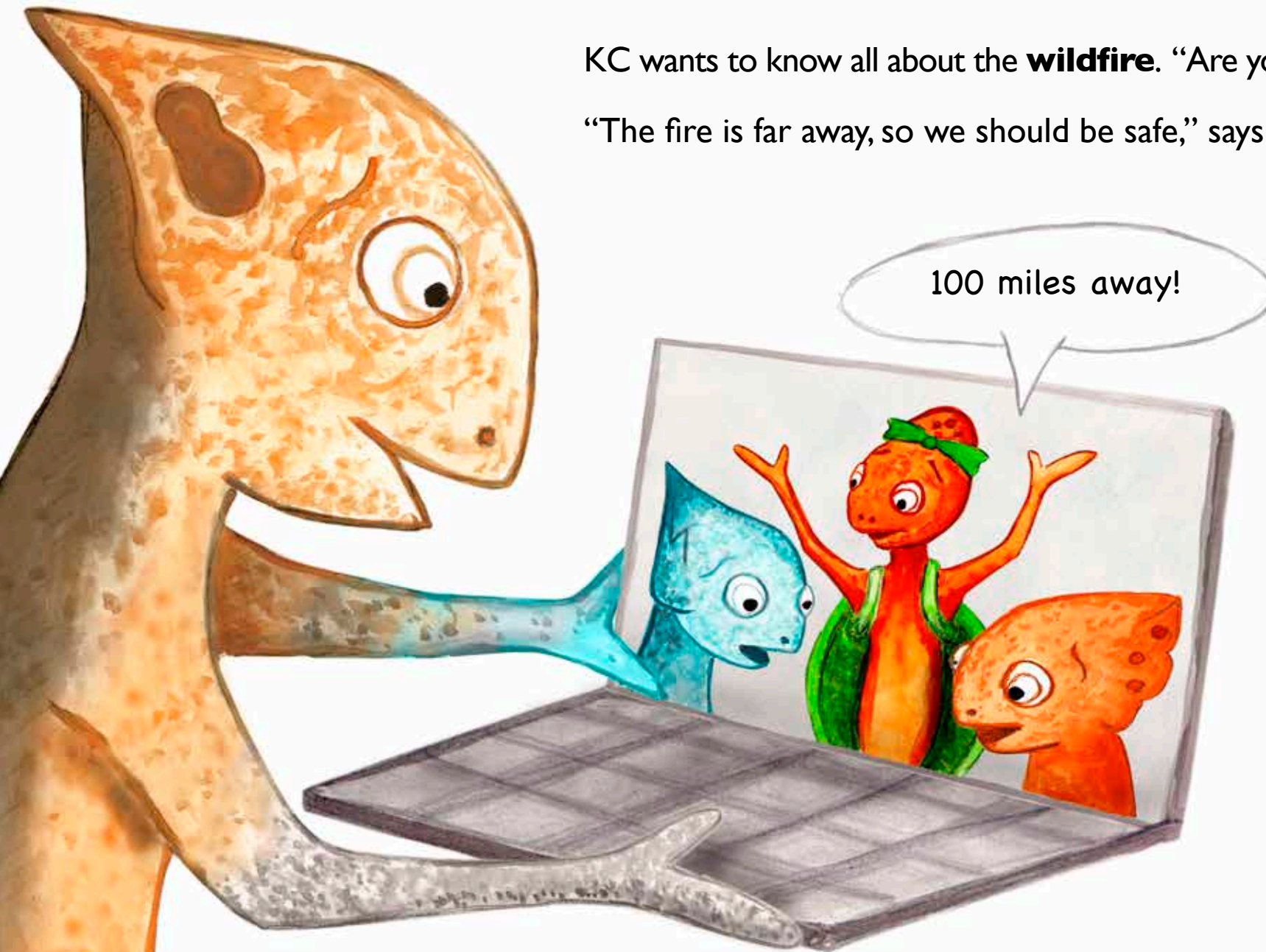


“But you’re still orange, so the air is not clean yet, even inside!” says Kool.

“Do you think KC is breathing bad air too?” asks Coco. They call KC for a video chat.

KC wants to know all about the **wildfire**. “Are you guys scared?”

“The fire is far away, so we should be safe,” says Coco.



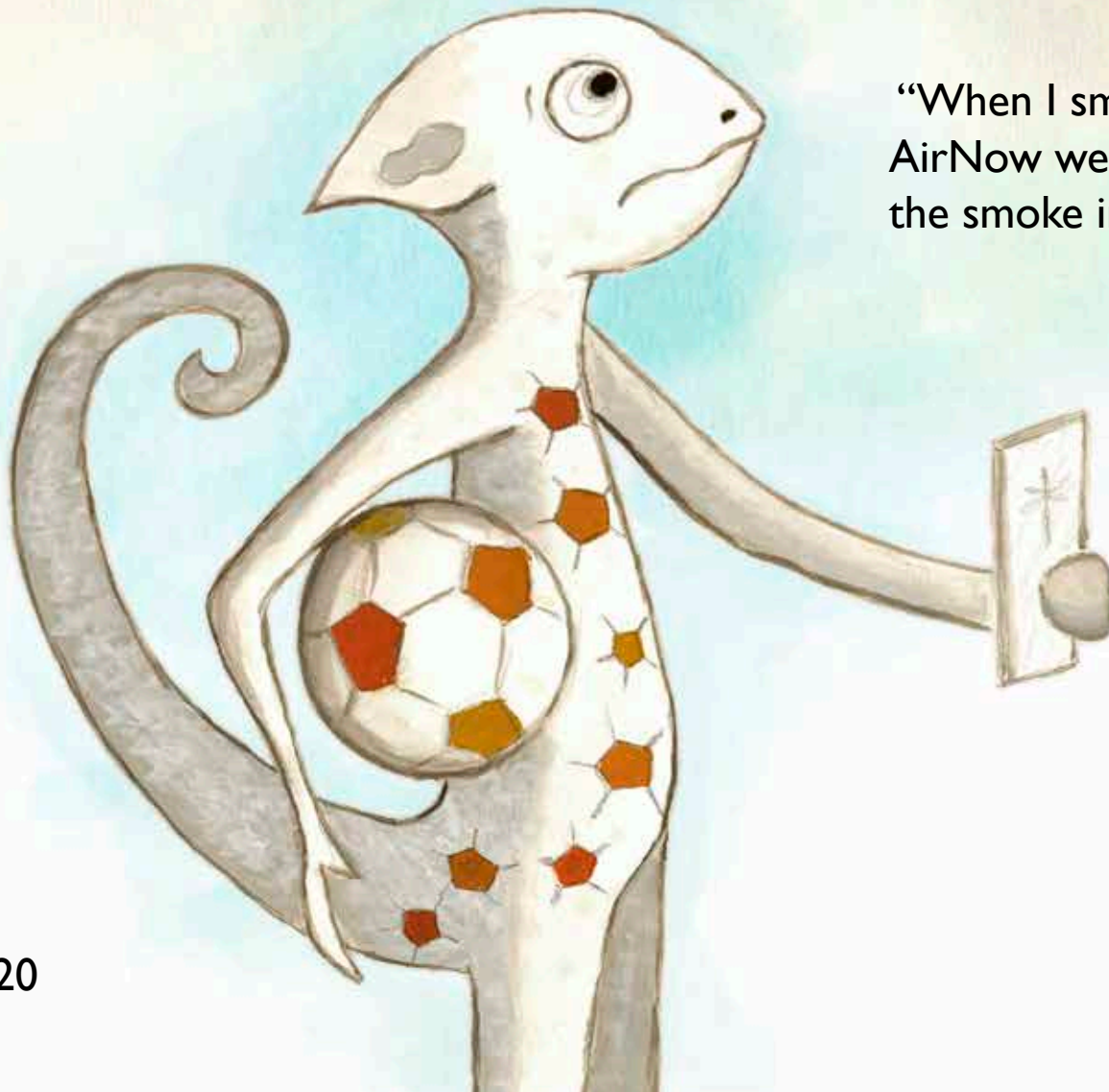
“But the wind is blowing the smoke all the way here, and it’s making the air dirty,” adds Kool.



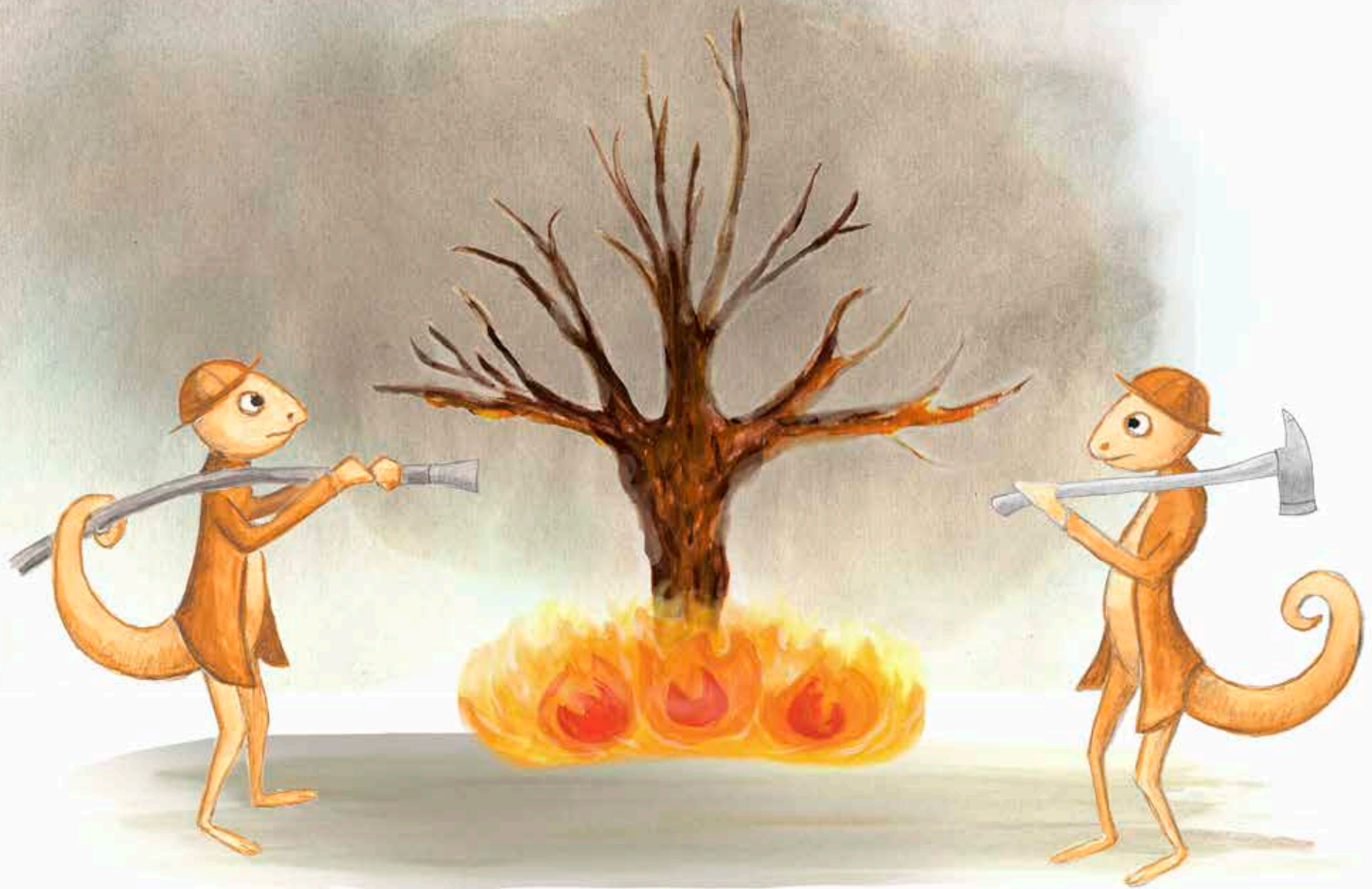
“Yikes, can you breathe okay?” asks KC.

Coco says, “We still play outside, but just not as hard or for as long. Inside we keep the doors and windows closed to keep out the smoke.”

“We have a fire here, too!” KC tells them. “But it’s not a **wildfire**. Sometimes firefighters start small forest fires on purpose. They’re called **planned burns**. They clear out areas with lots of dead trees and brush. It helps keep **wildfires** from being as bad.”

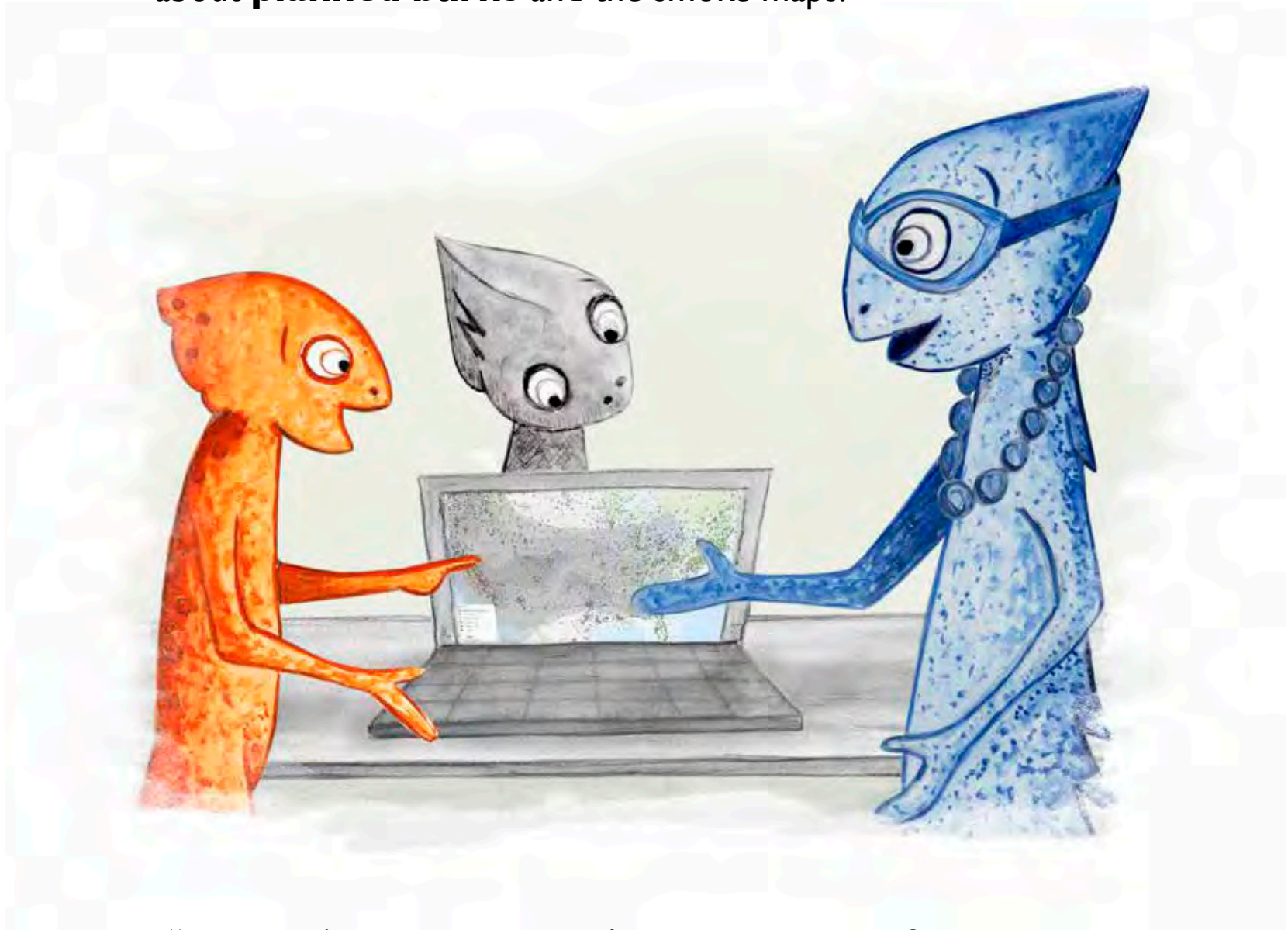


“When I smelled the smoke, I checked the AirNow website and I found maps that showed the smoke in my neighborhood,” said KC.



Planned Burns are also called prescribed burns or controlled burns. They are the controlled use of fire by a team of fire experts under certain weather conditions to keep the forest healthy.

The next day, Coco and Kool tell Ms. Bugeye what they learned about **planned burns** and the smoke maps.



“Why don’t you look on the AirNow website to find out more about what is happening here?” she says.

“Cool,” says Kool, “you can see where the smoke from different fires is moving. It can go really far!”



“**Air monitors** around us and all over the country measure how clean or dirty the air is. This helps scientists learn about **wildfire** smoke and air quality.”

One day Coco wakes up and doesn't smell smoke anymore. "I'm green again!"

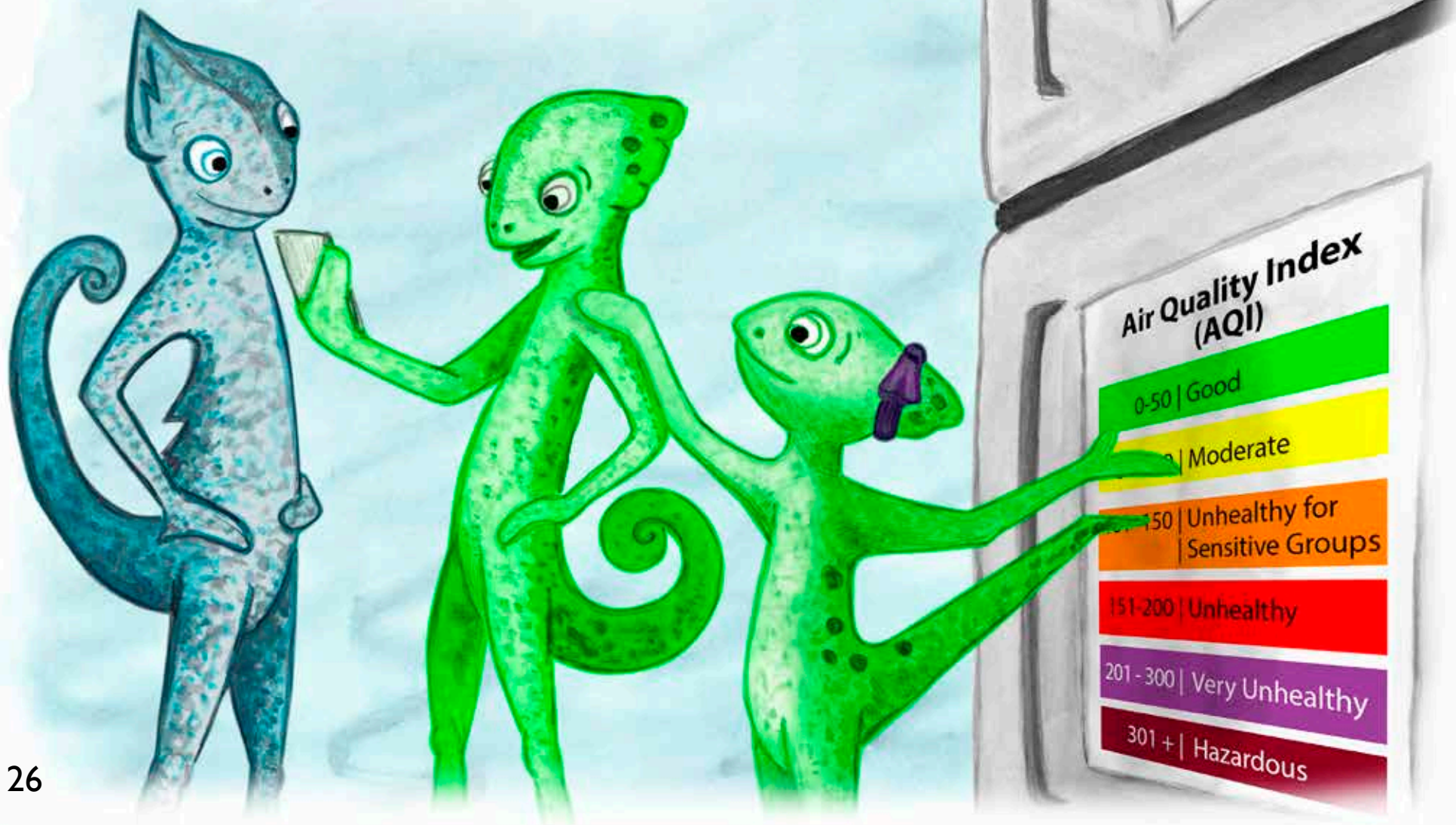




I'm a green
machine!

Firefighters stopped the **wildfire** from
spreading, and both the fire and the smoke
are now gone.

Coco, Kool and KC now know where to find information about **wildfire** smoke. And they know how to protect themselves when the air quality is bad...



And Cece wants to be a firefighter when she grows up! Coco wants to be a weather forecaster.

Learn more about **wildfire** smoke and the **Air Quality Index** at www.AirNow.gov.



Glossary

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Air Cleaner – Device used to remove pollutants, such as smoke, from the air.

Air Quality Index (AQI) – Think of the AQI as a yardstick that runs from 0 to 500. The higher the AQI value, the greater the amount of pollution in the air. The AQI has 6 colors to communicate how clean or dirty the air is in your community. When you know the AQI color in your area, you can take steps to protect your health.

Air Monitor – Equipment that measures levels of air pollution in the surrounding air. It can be used both indoors and outdoors.

Asthma – A disease that can cause trouble breathing. Many children, teens and adults have asthma. An asthma attack is when your lungs aren't getting enough air. It can make you cough or wheeze, or make your chest hurt or feel tight. Smoke can trigger asthma attacks.

Camouflage – Colors that allow an animal to blend in with its surroundings.

Planned Burns – Also known as prescribed burns or controlled burns. They are the controlled use of fire by a team of fire experts under certain weather conditions to keep the forest healthy.

Sensitive Groups – Sensitive groups are more likely to have health effects such as an asthma attack at lower levels of air pollution, such as when the AQI is orange. Groups that are considered sensitive to air pollution include children, people with asthma or heart disease, and older adults. See the complete list at <https://www.airnow.gov/publications/activity-guides-publications/>.

Wildfire – An unplanned fire in an area of plants and trees.

Wildfire Smoke – A mix of gases and fine particles from burning trees and plants, buildings, and other materials that can cause health problems like coughing, sore throats, and asthma attacks.

Teacher and Parent Reference (Answers at the end)

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1. No one should play outside when the air quality color is:

a) Orange b) Purple c) Angry

2. If the air quality color is orange or red, do you have to stay inside all day?

a) No, but take more breaks b) Yes c) No

3. If the air quality word for the day is “good,” what is the air quality color?

a) Green b) Orange c) Purple

4. The air quality color red means the air outside is:

a) Beautiful b) Red c) Dirty

5. Asthma makes it hard to:

a) Breathe b) Fight Crime c) Read

6. True or False: sometimes fires are planned.

a) True b) False

7. How far can wildfire smoke travel?

a) A few feet b) Thousands of miles c) Both a and b

8. If you’re playing outside and you see or smell smoke you should:

a) Ride your bike b) Keep playing outside c) Stop and tell your parents or teachers

9. Can you see dirty air?

a) Yes b) No c) Sometimes, but not always.

10. Why is it more of a problem for children to breathe dirty air?

a) You need more sleep b) Your bodies and lungs are still growing c) You eat more cookies

Resources

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Wildfire Resources

Prepare for or respond to a wildfire - www.epa.gov/natural-disasters/wildfires

Preparing for Wildfires (CDC) - www.cdc.gov/disasters/wildfires/beforefire.html

Wildfire Ready (Ready.gov)- www.ready.gov/wildfires

Fire and Smoke Map- fire.airnow.gov/

Smoke-Ready Toolbox for Wildfires - www.epa.gov/smoke-ready-toolbox-wildfires

Create a Clean Room to Protect Indoor Air Quality During a Wildfire -
www.epa.gov/indoor-air-quality-iaq/create-clean-room-protect-indoor-air-quality-during-wildfire

Air Quality Resources

What color is your air today? - www.airnow.gov

AIRNow for Students Page - <https://www.airnow.gov/education/students>

AirNow Air Quality Videos - <https://www.airnow.gov/air-quality-videos/>

Creating Healthy Indoor Air Quality in Schools - <https://www.epa.gov/iaq-schools>.

Pediatric Environmental Health Specialty Units (PEHSU)

The PEHSU were created to ensure that children and communities have access to, usually at no cost, special medical knowledge and resources for children faced with a health risk due to a natural or human-made environmental hazard.

Visit www.pehsu.net.

Air Quality Flag Program

The Air Quality Flag Program helps children, parents, others in the community be aware of daily air quality conditions using colored flags. Each day, a flag that signals the level of air pollution for that day is raised in front of participating organizations. By checking local flagpoles and comparing the colored flags to the Air Quality Index (AQI), members of the community can tell what the daily air quality is and adjust their activities to reduce their exposure to air pollution.

www.airnow.gov/flag.

Asthma Resources

Parent Information - Help Your Child Have Fewer Asthma Episodes:

- Work with your child's doctor to identify your child's asthma triggers.
- Take steps to reduce your child's exposure to asthma triggers.
- Work with your child's doctor to come up with a written action plan for managing your child's asthma.
- Follow the asthma action plan. Keep a quick relief inhaler close by...at home, at school, everywhere.
- Share copies of your child's asthma action plan with your child's school, teachers, babysitters, and family members.
- Talk about your child's asthma action plan with people in your child's life so that, in case of an asthma episode, they will know what to do.
- Notice how often your child has asthma symptoms like coughing, chest tightness, wheezing and trouble breathing. Ask for reports of asthma symptoms at school or child care.
- Remind your children to wash their hands to reduce the spread of colds.
- Contact your child's doctor if your child has asthma symptoms or uses a quick relief inhaler more than once or twice a week. You and your child's doctor may need to adjust the asthma action plan.

For more information on managing your child's asthma, visit www.epa.gov/asthma or www.noattacks.org.

Asthma Resources for Schools: - www.epa.gov/iaq-schools/managing-asthma-school-environment or www.nhlbi.nih.gov/health-topics/publications-and-resources

Teacher and Parent Reference (Answers)

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1. No one should play outside when the air quality color is:

b) Purple

2. If the air quality color is orange, red, or worse, do you have to stay inside all day?

a) No, but take more breaks. Exercise is good, but take it a little easier when the air is dirty. The longer you play outside, the more you need to take breaks, and play games that do not involve as much running.

3. If the air quality word for the day is “good,” what is the air quality color?

a) Green

4. The air quality color red means the air outside is:

c) Dirty

5. Asthma makes it hard to:

a) Breathe

6. True or False: sometimes fires are planned?

a) True

7. How far can wildfire smoke travel?

c) Both a and b

8. If you’re playing outside and you see or smell smoke you should:

c) Stop and tell your parents or teachers

9. Can you see dirty air?

c) Sometimes, but not always. Air can be dirty even when it looks clean. For example, you cannot see ozone.

10. Why is it more of a problem for children to breathe dirty air?

b) Your bodies and lungs are still growing

