

Reaching a Young Audience in City and Regional Planning

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Bachelor of Science, City and Regional Planning

by

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Background

Children have often been undervalued in the public participation process; however, cities are homes for the youth as much as they are for adults and it is imperative and obligatory that planners consider the needs and rights of children. Nigel Thomas, researcher on childhood studies, writes that planners are obligated and legally required to be inclusive of children's values and take their rights into consideration (Thomas, 2007). At the same time, it is important to include planning in children's educational curriculum. Educating the youth about the planning process will help empower and enhance their self-esteem as well as help them integrate into society as they get older (Thomas, 2007).

Currently, urban planning is a rare discussion topic in schools. The youth are often excluded in the planning process as most adults question their intellectual capacity and they hold little to no political power. However, this does not have to be the case - planning has the potential to change young minds when expressed in a medium children can understand.

Approaching a Young Audience Through Literature

Children's literature explores, orders, evaluates, and illuminates the human experience that many children cannot experience on their own. Enjoyment, aesthetics, understanding, information, knowledge, cognition, imagination, and language are some of the reasons why children's literature is critical to their growth (Stoodt et al, 1996). The following section discusses each of these aspects in further detail.

Enjoyment refers to how a child responds emotionally to the book. If a child finds a book enjoyable or relatable, they may want to read more and learn more. Books that preach and are too didactic (like college-leveled textbooks) may cause the child to lose interest, and they will stop listening and processing (Stoodt et al, 1996). However, if done right, educational literature can pique the interest of its audience, making it easier and more fun for them to learn. According to Stoodt, literature that "projects beauty and truth to many different people become classics" (Stoodt et al, 1996, p.7). Just like any creative work, books have their own kind of aesthetics - the flow of words on a page, the course of a story, and the

timeless feelings evoked. Literary works like Charlotte's Web or A Wrinkle in Time exemplify such aesthetics and are deemed as classics (Stoodt et al, 1996).

In addition, children can gain insights and understanding through the different roles of characters in books. Children's books often portray characters that are of the same age, so readers can relate to the feelings associated with the character's journey. They can also acquire feelings like compassion for others and reflect on their own behavior (Stoodt et al, 1996). In today's children's books, heavy topics such as death, anger, mental illness, alcoholism, brutality, racism are often brought up. Children can gain a better understanding of different people and cultures through folktales and legends that are passed down from generation to generation that teach life lessons (Stoodt et al, 1996). Through these stories, children can learn and appreciate the unique characteristics that bring us together.

Nonfiction books can increase their readers' store of knowledge while also stimulating readers to think outside the dimensions of the book and its contents. These topics can open a window to the past. Readers who find what they are reading interesting may continue to explore to fulfill their curiosities. Well-written books can encourage questioning and critical thinking and can stimulate cognition as it offers readers diverse perspectives on familiar topics by giving readers a medium to role-play (Stoodt et al, 1996, p.10). Readers can gain familiarity with new settings and discover unique solutions to problems.

Lastly, children's literature helps foster imagination as it allows for creativity, constructive power, and higher-order thinking skills. Books can show how vast the world is, breaking the barriers of reality, and inspire readers to the unlimited possibilities. Books can teach readers to think outside the box and improve their language skills beyond the classroom (Stoodt et al, 1996, p. 9, 11). Literature tends to be more eloquent and has a variety of words and sentence structures, while speaking often repeats the same phrases and more casual vocabulary. When children learn to speak, they will often pick up words and phrases from their favorite movies, shows, and books. Educators encourage parents to read aloud to their children to encourage literary language in their everyday life (Stoodt et al, 1996, p.11).

Children's books are categorized by various reading level systems, ranging from generic grade levels to the Lexile Framework for Reading. The grade level equivalent system is based on a child's

school grade level. Each grade level has subsections ranging from 0.1 to 0.9. For example, a child in fifth grade should be able to read a book graded as level 5.1 to 5.9. The higher the number, the more complex the book is (Manna, n.d.).

Guided reading level is tailored more towards teachers, so that teachers can have a “guide” in finding the best material to teach their students. This system is more precise than the grade level system in that it has sublevels within each grade level represented by alphabetical letters. Each grade level is assigned letters in the alphabet; letters further down the alphabet indicate a higher grade level. As shown in Figure 1, the kindergarten grade level matches the guided reading level’s first four letters of the alphabet: A, B, C, D. Overlap occurs between grades - first graders should be able to read at the guided reading levels of A through D, and E through I. Child psychologist L.S. Vygotsky advocates for the guided level system, stating that “optimal learning occurs when they are assisted by an educator, or expert ‘other,’ to read and understand a text with clear limited guidance” (Victoria State Government, 2020).

GRADE	SCHOLASTIC GUIDED READING LEVEL	LEXILE [®] LEVELS
K	A	Beginning Reader
	B	
	C	
	D	
1	A	190L–530L
	B	
	C	
	D	
	E	
	F	
	G	
	H	
	I	
2	E	420L–650L
	F	
	G	
	H	
	I	
	J–K	
	L–M	
	N	

Figure 1: Guided Reading Level Resource Chart (Source: Scholastic)

Finally, the Lexile Framework for Reading assesses a book's difficulty through a numerical system by looking at the length of a sentence and the vocabulary used (Manna, n.d.). The Lexile database separates the literature categories into five sections: 1) Prose, 2) Non-prose (NP), 3) Adult-directed (AD), 4) Nonconforming text (NC), and 5) Beginning readers (BR). The Lexile database only assesses books in the prose category. Literature works like poems, plays, and songs are rated as non-prose. Books that are best read aloud are rated as adult-directed. Nonconforming books are books in which the vocabulary used is more complex than the content. Beginner readers are for books that are rated based on difficulty, starting at a zero or below (Manna, n.d.). According to MetaMetric, the company responsible for Lexile, the numerical system can range from below 0L to above 2000L (Lexile, n.d.). Over 100 million books

have been graded using the Lexile system, including the popular *Harry Potter* series, measuring at 880L (Lexile, n.d.).

Though the product may seem simple, the process of writing a children's book can be complex. Writers have to first come up with an idea, a story, and characters that children can identify with (Durant, n.d.). They must be considerate of the language used to match their intended audience. Graphics can be used to convey certain scenes that would otherwise be too wordy to explain. Things like clothing styles or surrounding descriptions can be shown in a simple picture. A good picture book should have around a maximum of around 600-700 words overall (Durant, n.d.). Children have short-attention spans, and as stated before, if children do not find what they are reading interesting, they lose interest and stop learning (Stoodt et al, 1996, p.6).

Planning with a Young Audience

Urban planning has a huge impact on children, as their environment plays a significant role in their growth. City planners and public officials often overlook the young population as they do not contribute any political power in the form of voting and paying taxes. Brown also finds that adults doubt the “intellectual capacity” of children, due to their lack of real-world knowledge (Brown et al, 2019). According to UNICEF, the majority of the world's population live in cities, 70% of these occupants are children (UNICEF, n.d.). Children are affected by the same (if not more sensitive) risks and challenges that adults have to deal with such as air and noise pollution, crime, sedentary lifestyles, etc. (Brown et al, 2019). Poor air quality, noise pollution, and crime are more prevalent in urban areas, and children are more susceptible to the effects of these surroundings (Brown et al, 2019).

The youth need more than just pediatric care to grow up healthy. Their environments play a crucial part to their growth - children need room to play as it shapes their cognitive and physical development (Brown et al, 2019). For example, a playground has different obstacle courses that children can interact with, which helps develop their gross motor skills. Providing a space for children to safely explore their surroundings is just as important as it gives them an opportunity to learn on their own.

Planners need to consider child-friendly infrastructure into their planning. Planners should be considering the heights of children, as they use the same network of spaces and streets and as adults. Better, safer streets will encourage those in an urban landscape to go out and establish healthier lifestyles, especially in their youth (Brown et al, 2019).

As children walk, bike, and bus to school, the need for safer street networks becomes more apparent. A study in the Netherlands showed that a high proportion of their students that cycle to school have a high level of child satisfaction and happiness (Brown et al, 2019). Finland highly encourages their primary stage students to walk to school and they put a lot of emphasis on protecting these children. Researchers such as Stanley et al (2015) show the mental and physical benefits of children who walk, cycle, or even scoot to school, such as having less body fat and are less likely to be obese (Stanley et al, 2015, Brown et al, 2019).

However, health reasons are not the only reason as to why city planners should think of the youth, a good environment with well-connected networks will allow children to better connect to their communities. After the implementation of UNICEF's Child-Friendly Cities Initiative, city planners all over the world are gradually beginning to see the value in planning for children (UNICEF, n.d.). This concept of child-friendly cities is not a standard model, but instead a framework used to guide cities in its "environment, governance and services" (Riggio, 2002, p.45). More and more children are growing up in urban areas especially in low- and middle- income nations where children often have to live with their families in one-room units without most basic support. Even wealthier children face restrictions as they live in an adult-dominated world with little opportunity for play and socializing (Riggio, 2002). No matter the age, ethnicity, or place, children should be able to comfortably grow in their city.

During the 1996 UN Conference on Human Settlements in Istanbul, it was stressed that the "well-being of children is the ultimate indicator of a healthy society and that child friendly cities are also cities that are better for all age groups" (Riggio, 2002, p.47). Child friendly cities can allow for residents to have a stronger sense of community, more people may be willing to stay where they grew up. According to PewResearch, about four in ten adults (42%) live in or near the community they grew up in,

citing family as the number one reason, however, a sense of community among other reasons was the second most-cited reason (Parker et al, 2018).

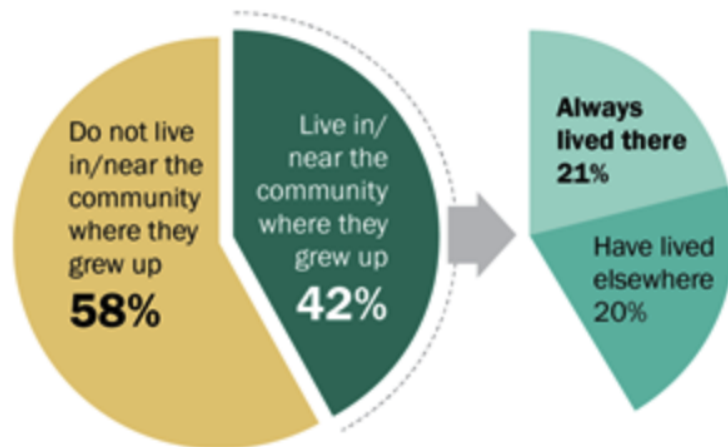


Figure 2: What Unites and Divides Urban, Suburban and Rural Communities (Parker et al, 2018).

Children have the rights to a safe environment, access to parks and nature, clean air, enjoyable activities, easy mobility, and a home just as much as adults do (Brown et al, 2019). In her TEDxMileHigh talk, community engagement specialist Mara Mintzer echoes this notion, mentioning that children are an indicator species when it comes to designing spaces (Mintzer, 2017). She continues to point out the issue when we overlook children's values in the public participation process: "If we aren't including children in our planning, who else aren't we including?" (Mintzer, 2017).

Concepts for Children's Books

Planning consists of a wide array of topics ranging from environmental issues to social justice. However, the best topics to teach young children are more simple and easy-to-grasp topics in which they can then choose to further pursue more knowledge. The topics we are focusing on will be general plan elements and the history of cities. Learning about general plans can provide children with a basic understanding of their surroundings, and how all these things are intertwined. From preserving historic

districts to constructing brand-new developments, general plans can explain how cities collaborate with various parties to reach a common goal, echoing the importance of teamwork to children. In regards to the history of cities, this knowledge can show the progression of how cities evolved over time. We can teach children that cities were not built in a day, and there is always room for improvement, even today.

General Plan Elements

The first book discusses a vital tool in city planning: general plans. A general plan provides a guideline for cities or counties to grow for at least the next decade or so before it has to be updated (Governor's Office of Planning and Research, 2020). General plans are vital to planning for the future, whether or not a community expects major changes in the area. All jurisdictions benefit from general plans, as they provide residents and community members an opportunity to voice their concerns and desires. General plans set forth what the city hopes to achieve, based on community goals and priorities. The State of California requires that each city and county must have their own general plan. There are eight main elements that make up the General Plan: 1) Land use, 2) Circulation, 3) Housing, 4) Open space, 5) Conservation, 6) Noise, 7) Safety, and 8) Environmental justice. Cities can choose to include additional elements if they wish which will have the same legal standing as the mandatory ones. Each element has specific goals and policies determined by the city planners and their communities (Governor's Office of Planning and Research, 2020).

Beginning with land use, this element enables planners to think about "what to put where" (Governor's Office of Planning and Research, 2020). The land use element often overlaps with other elements, since it shows different land uses like residential, commercial, industrial, agricultural, and open space. In order to connect these land uses, the circulation element plans bikeways, roadways, and other transportation alternatives for the community (Governor's Office of Planning and Research, 2020). Next, the housing element focuses on providing housing for its residents and projects future housing needs of a city. This element is crucial and is one of the highest priorities for California, overseen by the Department of Housing and Community Development (Governor's Office of Planning and Research, 2020).

The open space element lays out plans to preserve nature, parks, and outdoor recreation. This element works in conjunction with the conservation element which focuses more specifically on the natural resources. This includes soil, water, ecosystem services, mineral deposits, and living resources (Governor's Office of Planning and Research, 2020). Many of the policies and goals in this element have to do with retention, enhancement, and development. For example, agricultural conservation is often used as a way to preserve open space land, usually located along the edges of a city. These plots of open land can also serve as a buffer between urban developments (Governor's Office of Planning and Research, 2020).

Elements like noise and safety are just as important. Noise is a constant factor in people's lives, especially in urban areas where cars, highways and factories are common. The noise element identifies noise generators and helps provide mitigation efforts (Governor's Office of Planning and Research, 2020). The safety element outlines the city's response to natural disasters, climate change, and other hazards. The policies focus on mitigating the damage and protecting the community and its residents from these hazards. Finally, environmental justice identifies disadvantaged communities and provides steps to reduce health risks that come with living in these communities such as pollution exposure, dilapidated public facilities, and lack of healthy foods. America has a history of segregating people by the color of their skin, wealth, and culture, which is why environmental justice has recently been added as a mandatory element (Governor's Office of Planning and Research, 2020).

History of City Planning, Urban Form

As much as the authors of this literature review would love to continue their creative work in producing children's books, they face time constraints and are currently looking for jobs. A potential second book can cover how the urban fabric of cities adapted over time, beginning from the early cities of Mesopotamia to the thriving metropolitans of the United States. Historians discovered the 'Fertile Crescent', located mostly in modern-day Syria and Iraq, where agricultural and farming communities were born (Morris, 1994, p. 3). Located on good soil between the Tigris and Euphrates Rivers, the early

people of Mesopotamia were able to establish farming and irrigation practices by 5500 BC (Morris, 1994, p. 5). Within Mesopotamia were Sumerian cities, made of four basic elements: 1) The religious precinct (temenos), 2) The outer town, 3) The old walled city, and 4) The homes within these walls (Woolley, 1982, p. 22). Ur of the Chaldees is one of the first examples of organic growth, where the development of a city is unplanned. The growth of these early cities began by surrounding the main temple (Morris, 1994, p. 8).

Sumerian homes reached two stories tall, and were built with local resources such as mud bricks, stone, and timber (Pollock, 1999, p. 53). As growth increased, homes had to be built outside the city walls, but still within a proximity that would allow for trading (Morris, 1994, p. 22). These homes were usually built on higher ground to reduce the risk of flooding from the Euphrates river (Morris, 1994, p. 22). Street systems began to form around the residential areas, creating a sense of community and greater connection to the city as a whole (Pollock, 1999, p. 48).

Between 500 to 600 BC, the Greek city emerged as the first planned city of its kind, carved by careful planning to determine where and how people could live, worship, and gather. Greek cities such as Athens and Miletus were formed by an enclosing city wall, residential areas, cultural areas, religious precincts, an *acropolis* (fortified citadel), and *agora* (central public space) (Ward-Perkins, 1974, p. 16). The introduction of marble as a building material became a staple of Greek architecture (Morris, 1994, p. 37). In the haste of colonization, the Greeks followed this formula with settlements like Syracuse, Naples, and Pompeii (Morris, 1994, p. 40).

After the Persians destroyed Miletus in 494 BC, architect Hippodamus of Miletus, devised a master plan to redevelop the city (Ward-Perkins, 1974, p.14). Though not the first to establish a gridiron layout, Hippodamus' work in rebuilding Miletus consisted of separating land uses by blocks to surround the agora (Ward-Perkins, 1974, p. 16-17). As Greek civilizations matured, street layouts remained faithful to the agora and acropolis' location at the center of town (Ward-Perkins, 1974, p. 24).

The Roman Empire began in 753 BC until the fall of the Empire in 476 AD. Similarly to Greece, Roman cities took advantage of the gridiron, and had an *agora* of their own, called the forum (Rykwert,

1976, p. 36). Rome established thousands of what are known as *castra*, temporary military bases to seize land (Morris, 1994, p. 57). A typical *castra* was formed by a defensive wall, a forum, a theater, arena, and a main street network (Morris, 1994, p. 57). Dwelling units appeared in two types: the *domus*, single-family homes reserved for the wealthy, and the *insula*, the common building of flats that provided housing for six people (Morris, 1994, p. 63). Three-storey buildings began to occupy Roman settlements, though the lack of structural integrity of early homes prompted Julius Caesar to set a height limit of 70 ft; later successor Emperor Trajan narrowed it to 60 ft (Morris, 1994, p. 63).

The influx in population elicited a need for a stable water intake and output (Ward-Perkins, 1974, p. 34). Sewage was discharged into the Tiber River, and the construction of aqueducts allowed for a continuous supply of water, over 94 gallons per person daily (Morris, 1994, p. 61). As trade expanded in the region, more settlements were established in present-day Spain, Germany, and then to Britain (Morris, 1994, p. 89). Under the looming fear of war, early cities continued to build and maintain fortified outer walls, lined with towers and gates (Morris, 1994, p. 63). Late Medieval towns such as Monpazier and Aigues-Mortes were made of several key components: a church square, outer wall, towers, streets, castles, and the market places (Morris, 1994, p. 120).

In fourteenth-century Italy, planned towns became more prevalent, with a greater emphasis placed on public spaces and connectivity (Morris, 1994, p. 161). Urban form in this era often deviated from the gridiron of the Mesopotamian era, the newly reimagined gridiron provided three services: a foundation for residential districts, a layout for new urban areas, and a primary street system (Morris, 1994, p. 164). Depending on the type of space, public space design included trees, screens, and terraces that adorned these areas for public usage and enjoyment (Morris, 1994, p. 179). Public spaces thrived under Renaissance urban form, making way for culturally significant spaces such as the Capitol Piazza, the Piazza del Popolo, and the Piazza of St Mark's (Morris, 1994, p. 179).

France set the standard for public spaces like that of the Gardens of Versailles and the many squares around the city of Paris (Morris, 1994, p. 211). In the sixteenth century, the Renaissance movement had inspired architects such as François Mansart and Gabriel the Elder to plan beautiful public

spaces in dedication to the royal families (Morris, 1994, p. 213). The Gardens, designed by André Le Nôtre, Louis Le Vau, and Charles Le Brun, was an extensive display of planned urban form (Morris, 1994, p. 212). Versailles was planned after a modified gridiron, with “radial routes” connecting the palace to the gardens and the park. The “radial routes” continue throughout Paris with the Champs-Élysées, creating the historical axis and showcasing the Arc de Triomphe du Carrousel, the obelisk of the Place de la Concorde, and the Grande Arche of La Défense (Morris, 1994, p. 213).

America, born from British, Spanish and French influence, underwent an accelerated pace of urban form progression. In the seventeenth century, most Spanish settlements in North America were formed by a *presidio*, a *pueblo*, and a *mission*, echoing the foundations of Mesopotamian cities (Morris, 1994, p. 321). *Presidios* are military settlements and the Spanish-equivalent to the *agora* (Morris, 1994, p. 321). Cities densified across the nation, with gridirons implemented from Atlanta to San Francisco. As railroad systems were being established, railroad developers knew that their profit relied on people (Morris, 1994, p. 336). New towns meant new locations for railroad stations, which in turn, meant new profit for the railroad promoters (Morris, 1994, p. 361). Though this section offers only a brief account of select societies’ history of urban form, our goal is to illustrate that cities are more than the walls around it. Urban form thrives on the people, who they are and what they can learn from the space that they have.

Case Studies

To better understand current strategies of educating young children about urban planning, our search led us to several case studies around the world. These studies centered around workshops and discussions that allowed students to take on a more active role as a participant. This section discusses the successes and limitations of current strategies from researchers around the world that have been teaching urban planning and related fields to young students.

In a study done by Masri (2017), the team developed a one-day pilot-study workshop that invited twenty-five children (ages 6-9) to engage and discuss their visions and ideas about the future of their hometown in Saida, Lebanon. The workshop, “Have your Say for Saida”, divided the young participants

into three groups each given an “adult helper” for the day (Masri, 2017). One activity asked the children to identify and discuss their opinion on landmarks and places in Saida through photographs (Masri, 2017). During this activity, researchers found that most children preferred to have locations such as sport stadiums, shopping malls, and cinemas within walking distance to their homes.

Another activity titled *Blocks and Blocks* let students create their “dream neighborhood” on a paper split into three columns and three rows (total of 9 squares). Using wood blocks and other toys, each colored block was assigned a land use (Masri, 2017). Yellow blocks represented residential areas, red represented commercial, purple industrial, and blue educational (Masri, 2017). This activity allowed students to create and visualize the compatibility of land uses such as housing and parks (Masri, 2017). According to the study, most children placed green space in the center of their paper. Of the total neighborhood area, the children each designated nearly $\frac{1}{3}$ of their models to green space, signifying the importance of parks and open space to these young planners (Masri, 2017). Additionally, many of the children did not hesitate to mix land uses, combining housing and commercial wood blocks in the same squares. Figure 1 depicts four models created by the children for *Blocks and Blocks*. Masri’s pilot-workshop shows us that children hold their own values and visions when it comes to discussing the places they grow up in (Masri, 2017). Their unique knowledge and experiences can help shape the future of planning - all it takes is a little encouragement.



Figure 2. Sample of Blocks and Blocks models executed by participating children.

Wales and Nordstrom (2019) discuss the limitations of urban planning without the consultation of children, arguing that they are just as important as any other stakeholder (Masri, 2017). They consider the fact that children have little to no “independent mobility,” and thus, are heavily reliant on the environments they frequently access to fulfill their needs of enjoyment and exploration (Masri, 2017). Torres (2009) echoes this in his study, stating that urban sprawl can be to blame for children’s mobility, or lack thereof (Masri, 2017). Youth mobility depends on their parents and their parents’ access to automobiles. Torres (2009) also writes that childrens’ relationship with their neighborhoods is determined by the distance from their school. This is not only a loss of physical and social activity, but a loss in opportunity for children to engage with the places they call home (Masri, 2017). Torres (2009) writes that we can all benefit if the youth were given a voice in urban planning - where they thrive, we thrive.

Wales and Nordstrom (2019) emphasize that children use and relate to the places they are familiar with in “intense, sense-oriented and physical ways,” which produce very different activity patterns than that of adults. They also explain that “children’s defining activity...is play.” Environments are crucial to their growth as it nourishes adaptation and exploration. When we involve children in the planning and designing of these environments, it opens up opportunities for engagement in their futures as adults.

Examples of Childrens’ Books on Planning-Adjacent Topics

In Simon Scoones’ Climate Change: Our Impact on the Planet, Scoones writes to young students about the causes of climate change, impacts on human health, and rising sea levels. This work included illustrations to show types of climates around the world and charts to show carbon emissions over time. That said, we believed that the terminology used in Scoones’ writing, though accurate, did not reflect the level of knowledge of the audience. The following is an example of Scoones’ thorough approach that can be too advanced for a younger age group:

“The complex system of interrelationships between different species means that damage to, or the destruction of, one or more species may trigger a negative chain reaction that will be felt throughout the ecosystem” (Scoones, 2002, p. 39).

With this in mind, we will aim for the same level of depth but will be more considerate of the vocabulary we choose in our writing.

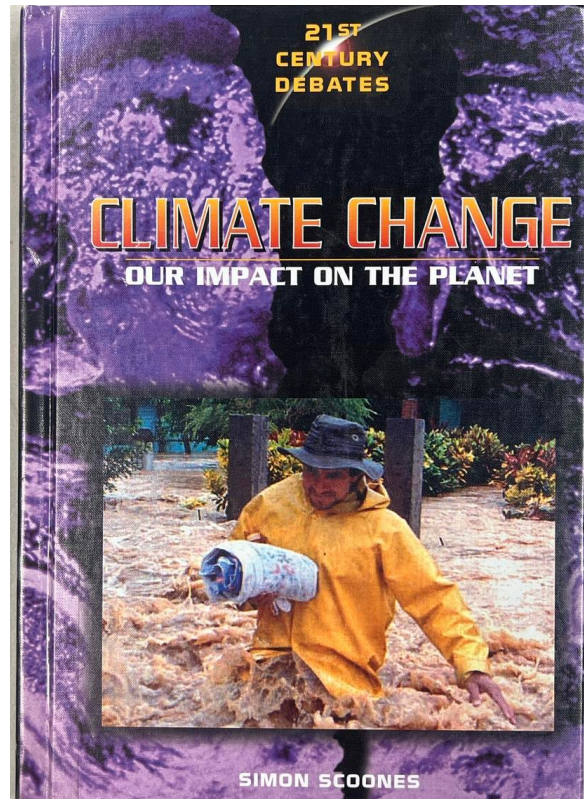


Figure 3. Climate Change: Our Impact on the Planet Book Cover

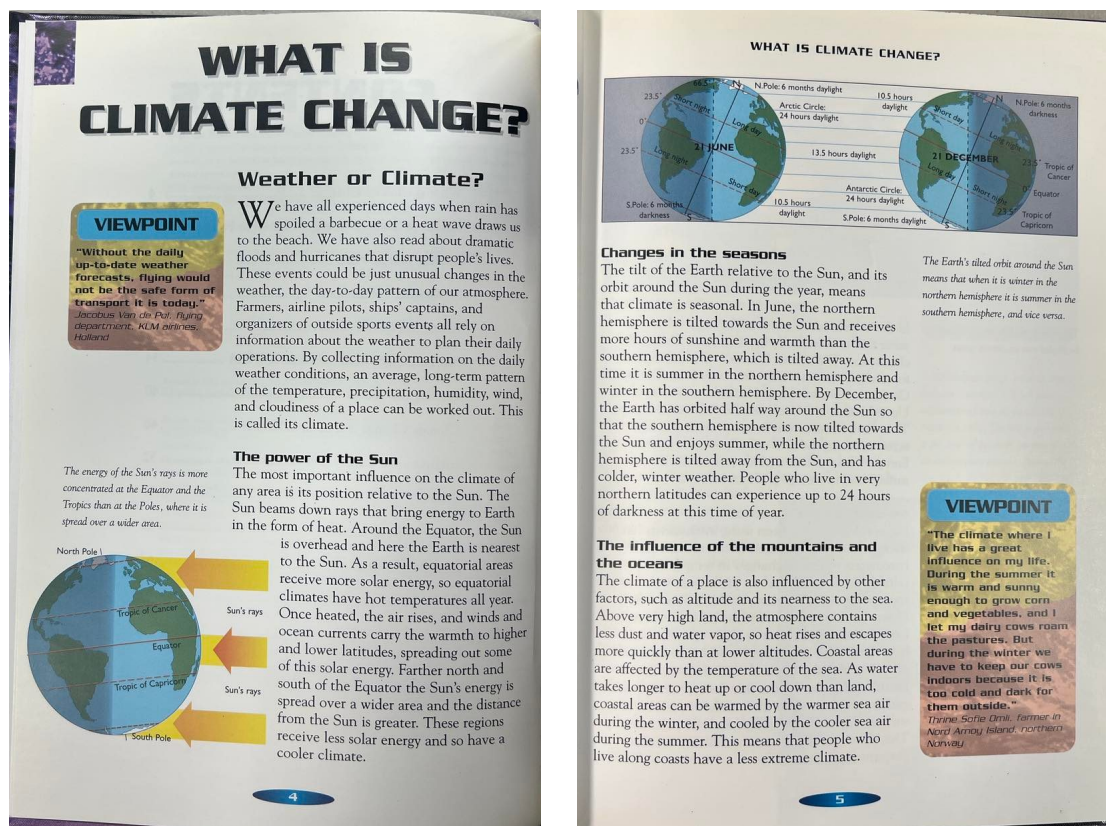


Figure 4. Climate Change: Our Impact on the Planet Sample Pages

Lucy Bell's You Can Change the World: The Kids' Guide to a Better Planet offers a more informative approach to how children can mitigate their impacts on climate change through step-by-step guides, activities, and short biographies (Bell, 2019). This book has no storyline or fictional characters, allowing younger students to read in any order they choose. The book is structured into eight general topics, and each topic covers several sub-topics. Bell's work also favors an informal tone and shorter sentences, which reflects the thought process of a younger audience. This book discussed concepts such as overfishing, animal activism, and greenhouse gasses, but included syntax that may not match a younger audience. The following is an example of a "simplified" tone and vocabulary:

"The most important thing about food is knowing where it comes from. Is it local, or did it have to travel hundreds of miles to get to you? When you're buying meat, fruits, and vegetables from a

supermarket, it can be hard to find out exactly where it came from or what processes went into growing it” (Bell, 2019, p. 89).

Despite the lack of plot, Bell is intentional in catering the book to children with the use of shorter sentences and easy-to-understand vocabulary. Bell’s tone and diction in You Can Change the World is what our children’s books aim to achieve.

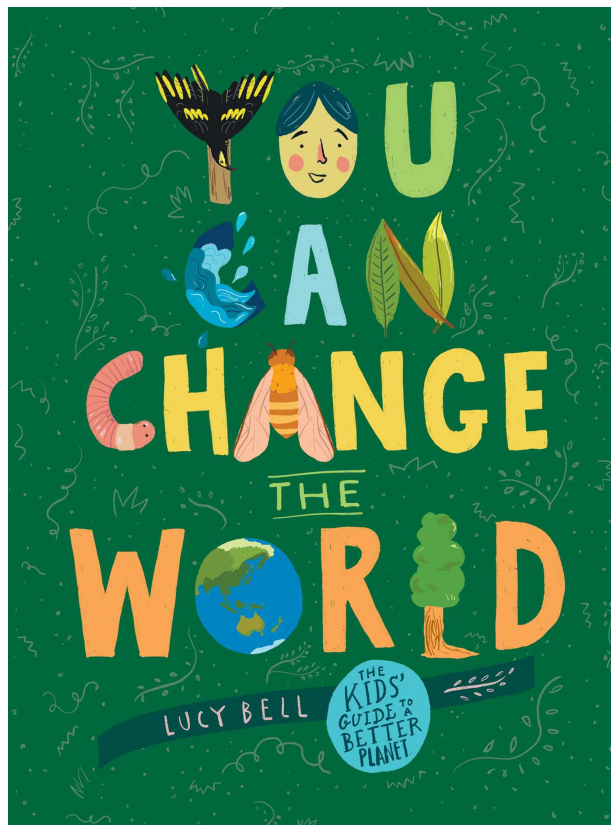


Figure 5. You Can Change the World Book Cover (Bell, 2019)



Figure 6. You Can Change the World Sample Page (Bell, 2019)

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Appendix

We finished our Children's Book, Fauna: A Place for Me and You, in early March 2021. Shortly after receiving comments from our advisor, Dr. Amir Hajrasouliha, we approached our professor Dr. Dave Amos about allowing his children to be our first readers. Dr. Amos' three children are 4, 6, and 10 years old. We had the opportunity to meet them in-person and hear their feedback directly. Their comments include the following:

- "Long" introduction and plot in the beginning
- Favorite characters include Zoe and Odin
- Enjoyed illustrations
- They learned that "cities need water, streets, and good plans" for a city to do well.
- Dave's oldest child (10) was able to read and understand the story.
 - She liked the short sections with less text.



Figure 7. Dr. Dave Amos' children reading Fauna: A Place for Me and You

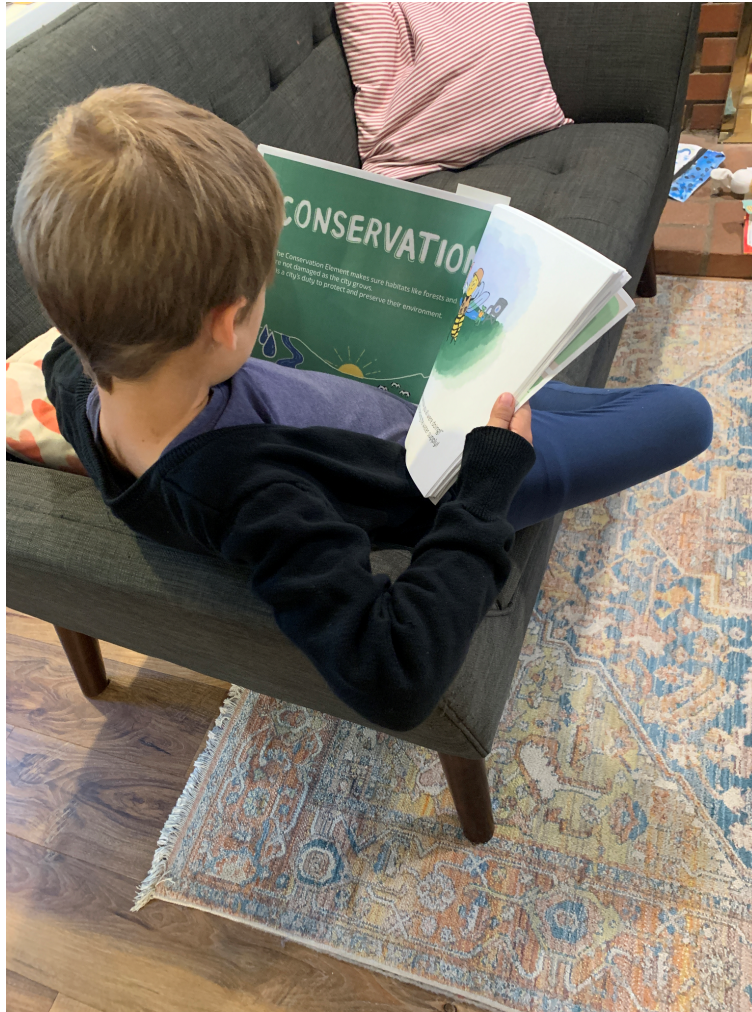


Figure 8. Dr. Dave Amos' second-oldest child reading Fauna: A Place for Me and You



Written and Illustrated by Kristie Woo and Vinnie Chen

Acknowledgements

We would like to thank Amir Hajrasouliha for all the enthusiasm and support.

We could not have done this without you.

This book has been a fun project that allowed us to let out our creativity.

We want to thank our families for being supportive throughout the process.

We want to thank Dave Amos for allowing his children to be our first young readers.

To all the amazing supporters, thank you.



Museum

City

Library

School

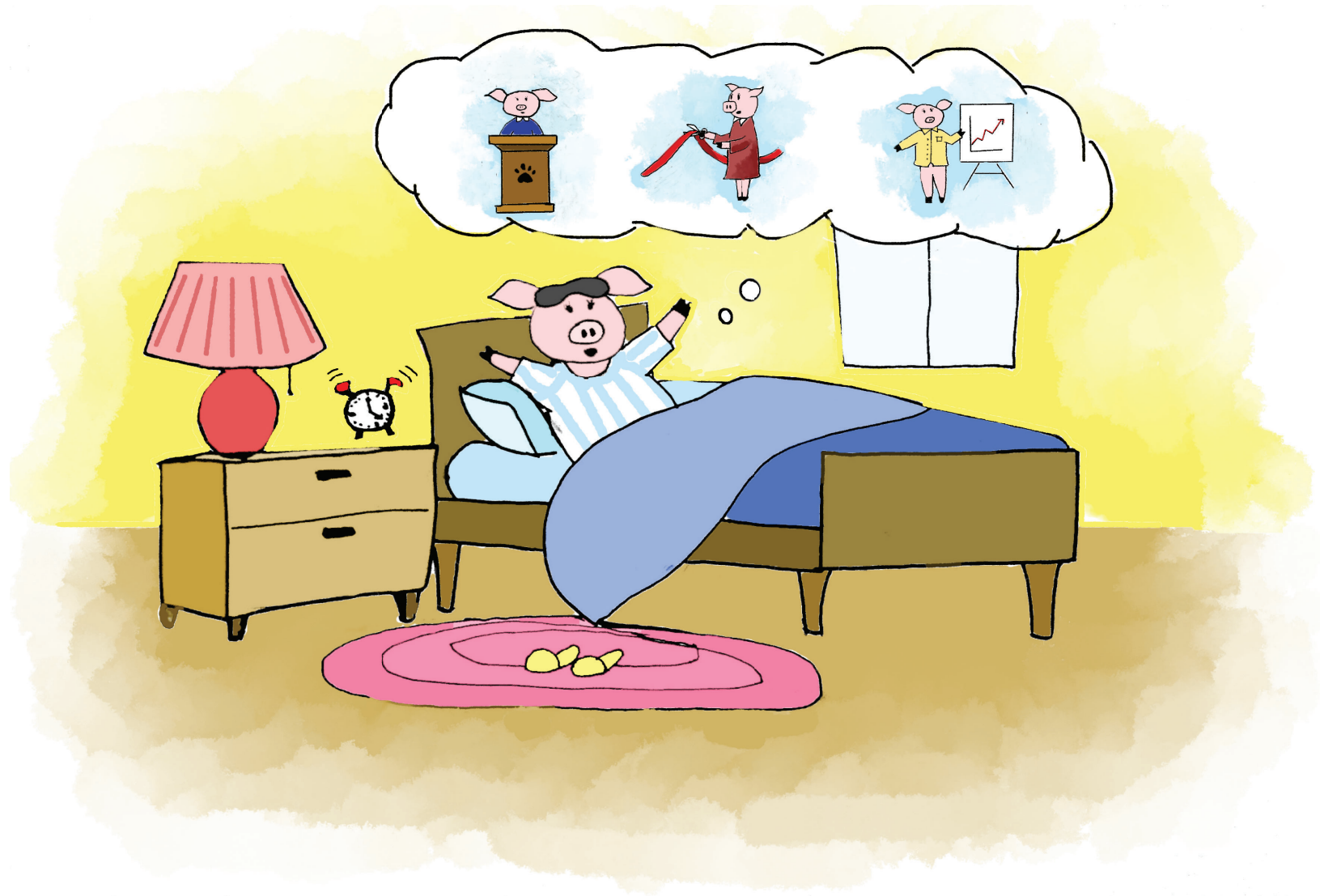
Fauna
Park

Fauna
Lake

WELCOME
City of Fauna



n
Hall



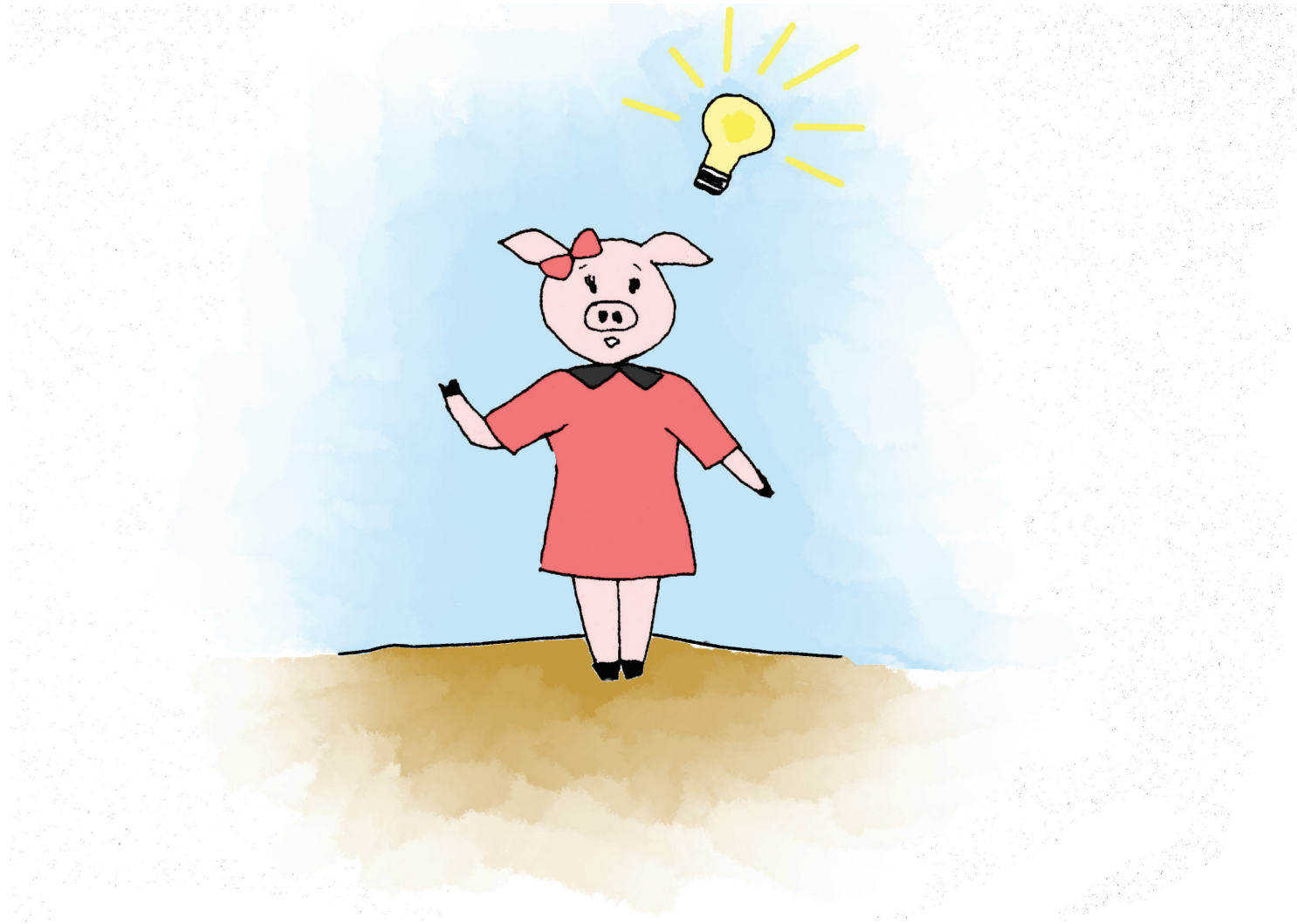
Today is a regular day for Zoe.
She's the mayor of the City of Fauna! As mayor, she works hard to keep parks clean, welcome new friends, and make sure everyone stays healthy.



“Good morning, Paige! It’s great to be out on such a sunny day!”
Paige greets, “Good morning to you, Zoe! I’ve got an important letter from the Kingdom of Flora - priority mail!”
“The Kingdom - it must be important!”, Zoe replies, “Thanks, Paige - see you soon!”



The letter has urgent news - there's a big storm heading towards Fauna Zoe: "Oh no, I have to prepare the town! Where should I start?"



“I know!”, Zoe exclaims.

“I’ll start with the old Plans - these should say something about what to do in the case of an emergency! Time to head to the Town Hall!”



“Our current plan covers housing and parks and roads, but there’s nothing that discusses harsh winters and severe storms!!!”



"Oh man, I don't think I'm doing this right"

"It looks like the City of Fauna has never seen a storm this scary..."



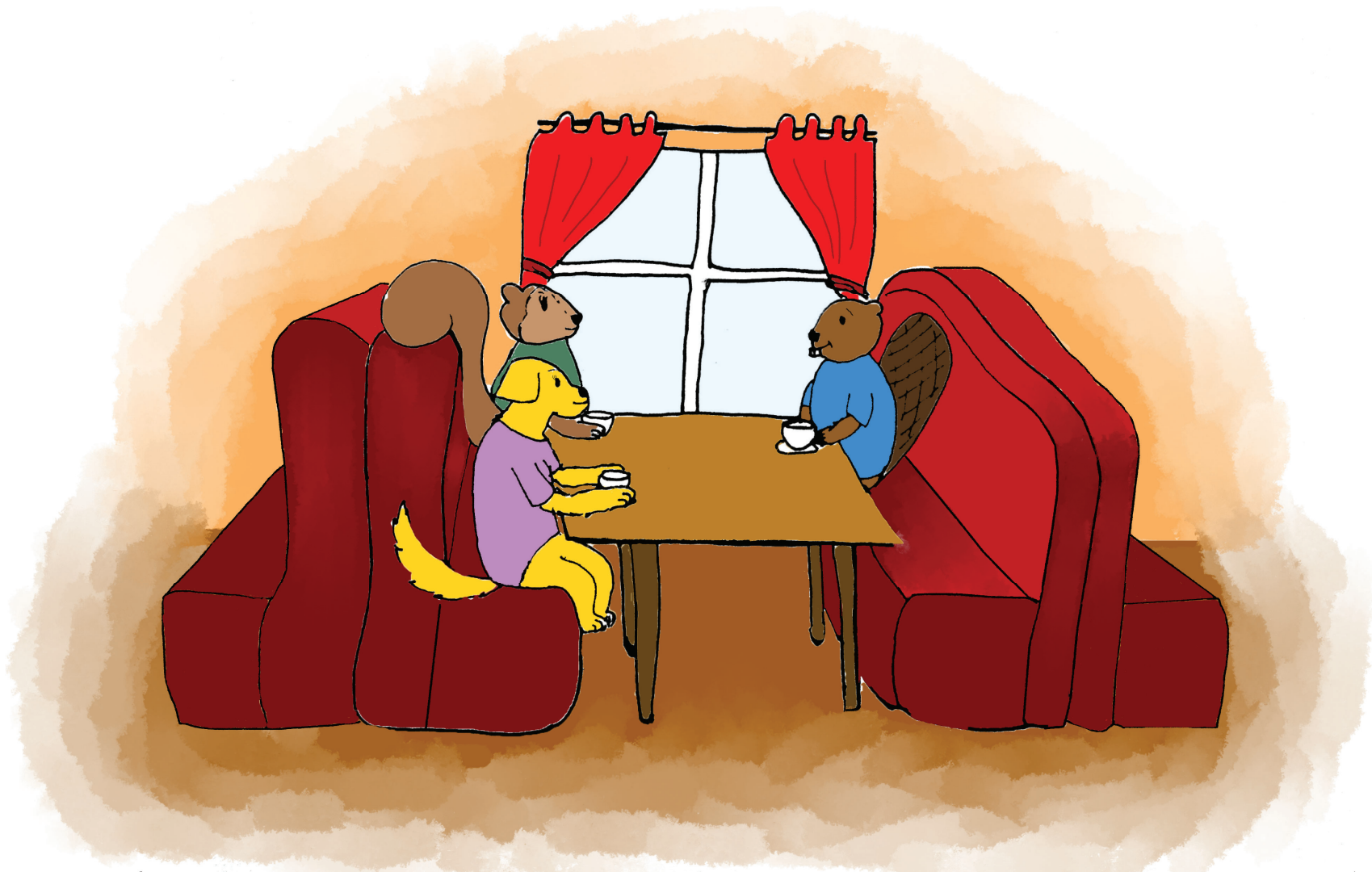
Suzie: "Hey Zoe, do you need help with anything?"

Zoe: "Everything's fine! There is nothing to worry about!!!"

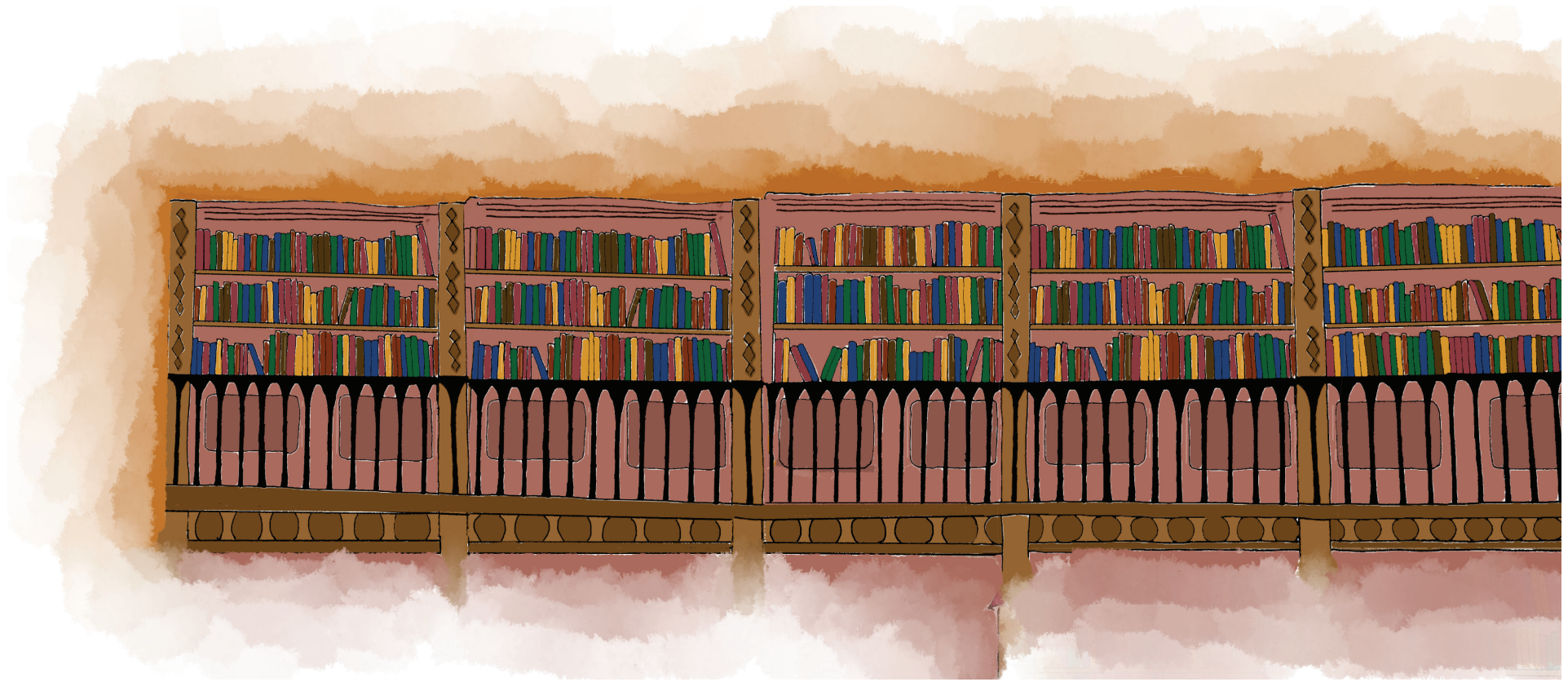


But things were not fine. And Zoe was feeling the weight of the town on her shoulders.

Molly and Esther: "Hey Zoe! You left this...!"



Her friends Suzie, Dash, and Bailey have their weekly coffee date. Unfortunately, Zoe is nowhere to be found.
Suzie: "Have you guys seen Zoe lately?"
Bailey: "No, I haven't. I'm getting worried"



Meanwhile, Zoe has been researching all day and all night at the Fauna Library hoping to find a solution.

Celeste: "Oh my goodness, poor Zoe. She's been working too hard lately. I better call her friends"

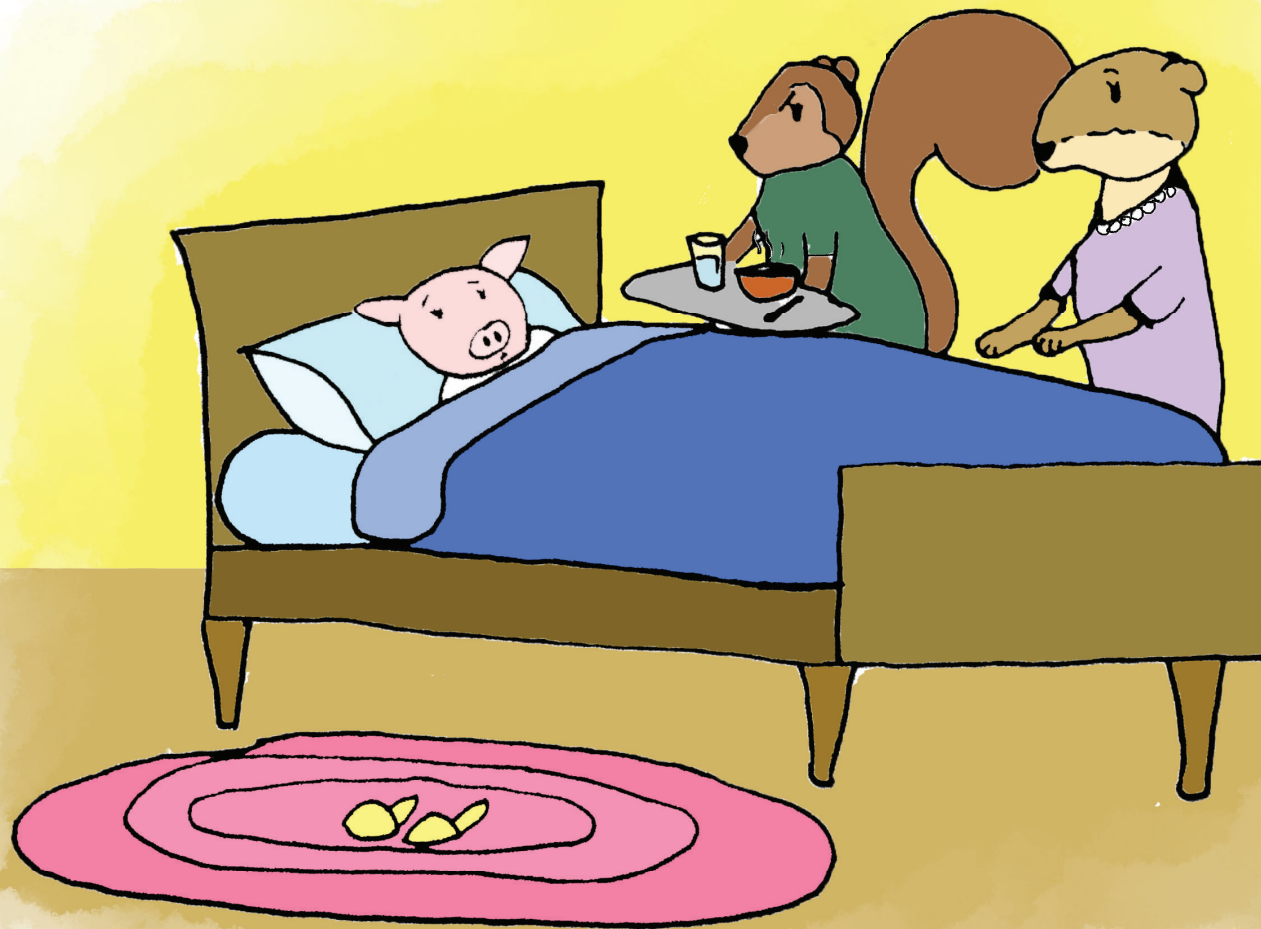


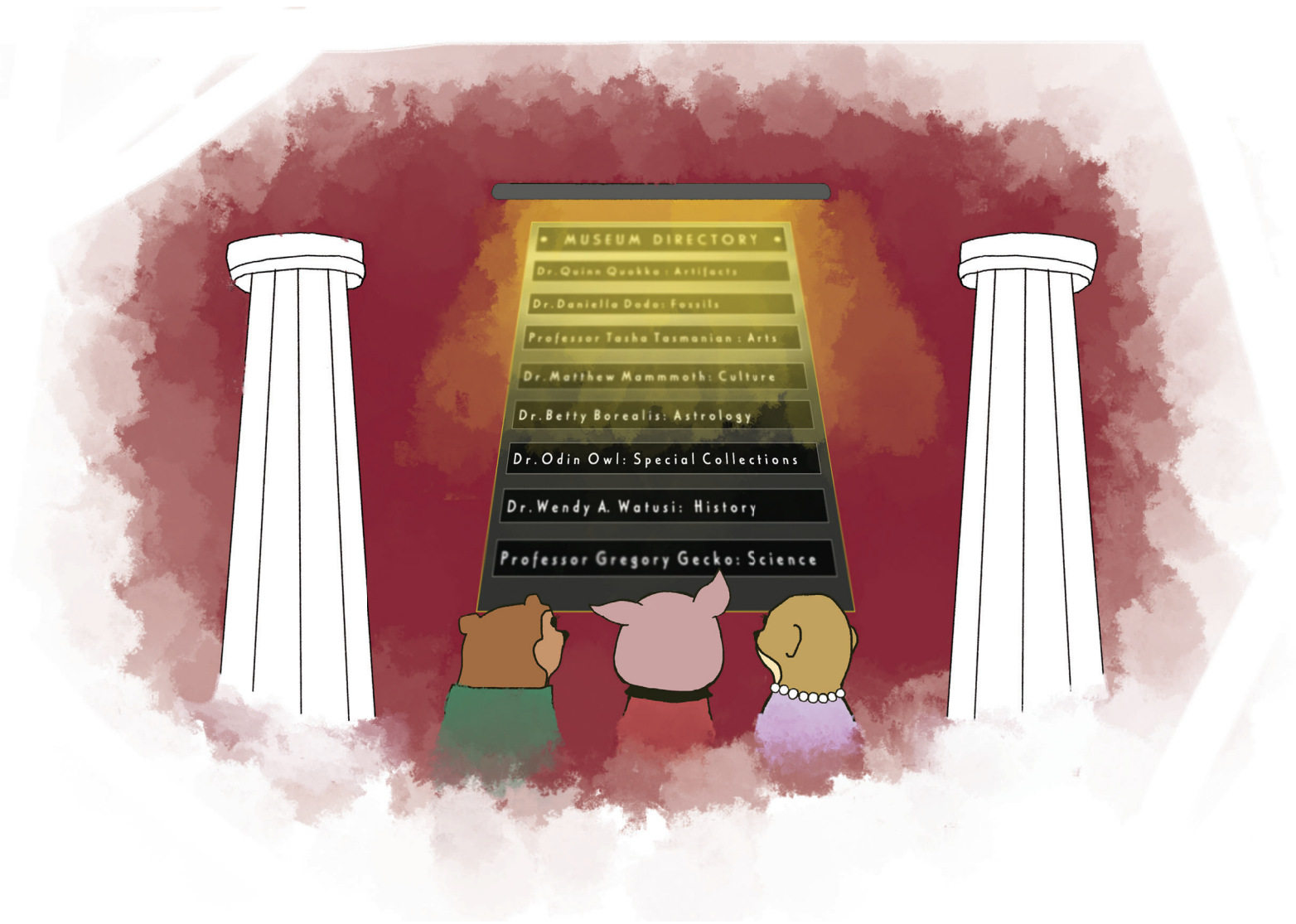
Suzie: "Zoe, what is going on? We haven't seen you in days!"

Molly: "Yeah Zoe, we're really worried about you."

Zoe: "I-.. I'm sorry guys. I received a letter from the Kingdom of Flora a week ago saying there was a big storm heading our way. I thought I could handle it on my own"

Molly: "Hm...I think I know who we can talk to - Odin!"





Zoe: "It looks like we can find Odin in the Special Collections"



Zoe: "Hello, Odin....um...sorry to bother you, but we could really use your help."

Odin: Zoe, it is always good to see you. Tell me what we're dealing with, and we can go from there.



Zoe: OK, so I received a letter from the Kingdom, telling us to get ready for a snowstorm. I looked everywhere in our library, even our old plans, and I just don't know how to prepare.

Odin: Ah, this problem sounds familiar. Come with me.....

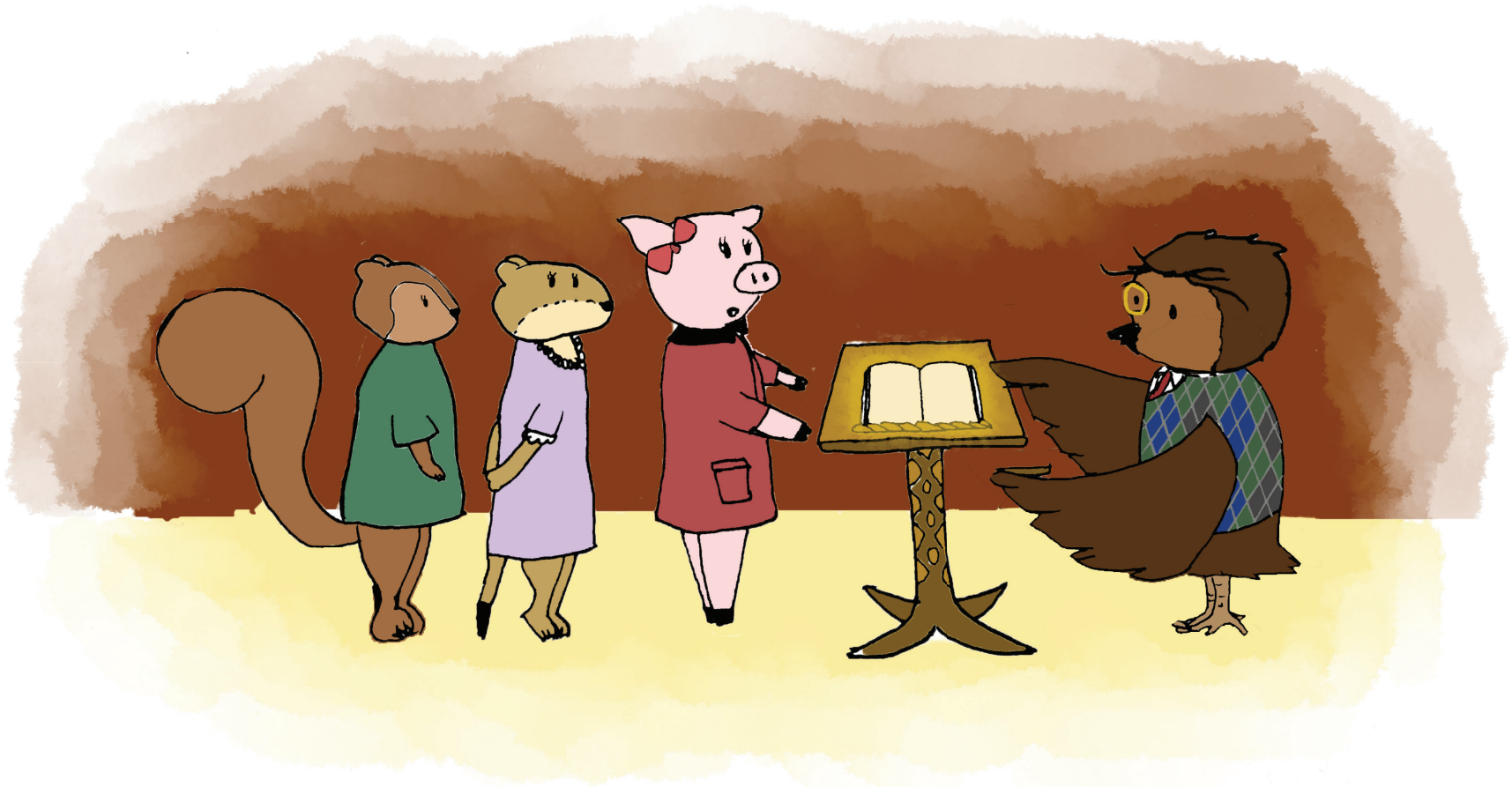
Zoe: Alright!

Odin: It's somewhere here... Actually here.... A-hA! This is what we're looking for!

Zoe, Suzie, and Molly: Woah, what is that?

Odin: This, right here, is the Story of the Living City. This book contains all the details of cities and civilizations from the beginning of time.





The book is on a lectern, glowing mysteriously.

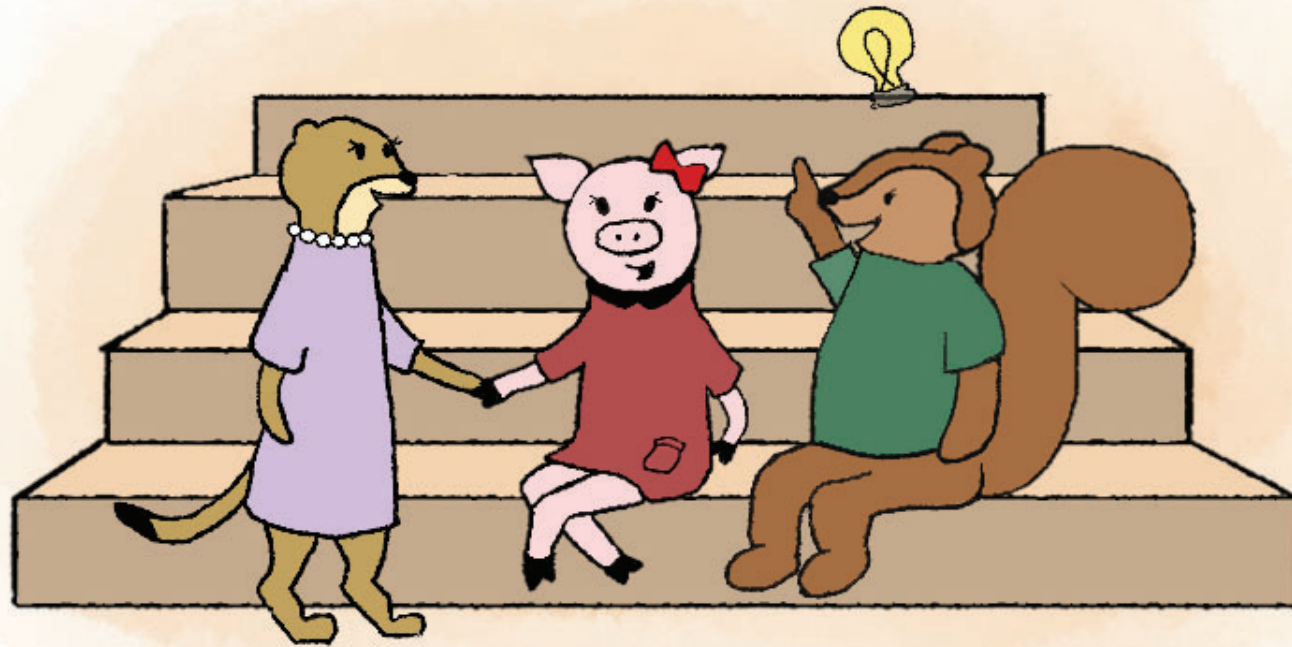
Zoe: It's blank?

Odin: That is correct. State your question, and the book will help you.

Zoe: Hm...alright, here goes nothing...How did other cities overcome natural disasters?



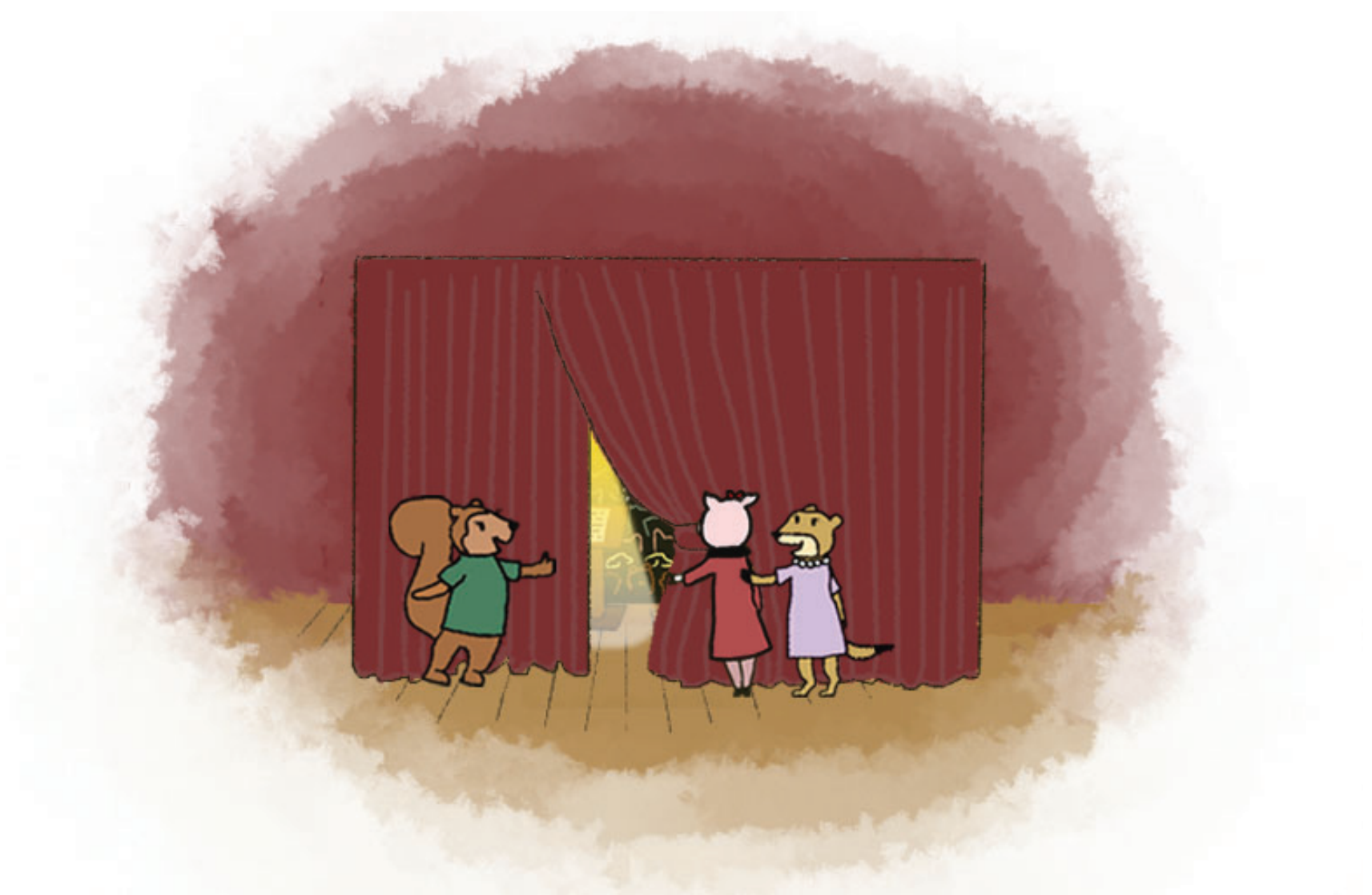
Words begin to appear about a country called America and how they got through the Dust Bowl. The country tried to create a plan based on the eight plan elements which saved them from a total disaster.



Zoe: "We can't abandon Fauna! This is our home - Let's get to work!"

Molly: "Zoe, we're your friends, and Fauna isn't just our homes - it's who we are."

Suzie: "We should set up an emergency town hall meeting right away. With everyone on board, I'm sure we can brave this storm!"



Zoe: "Oh my, there is so many people. I'm not sure I can do this. What if they don't like what I have to say?"
Her friends: "It's ok, we got your back."



At Town Hall, all the animals of Fauna have gathered waiting for the meeting to begin. As they wait, the animals talk amongst themselves.

Animals: "I wonder what this meeting is about"

Other animals: "I don't know, but it must be important!"

Zoe: *Ahem* "Hi, everyone, thank you for coming on such short notice, but I wanted to let everyone know that I received some bad news from the Kingdom of Flora. There's a big storm coming and our town is in danger!"

All the animals gasp as they listen to this piece of news. Zoe continues on.

Zoe: "I'm sorry everyone, I know I should have said something sooner, but I thought I could handle it on my own. Now, we've got to work together."

Slowly the crowd calms down. The animals begin to speak up one at a time, offering their services

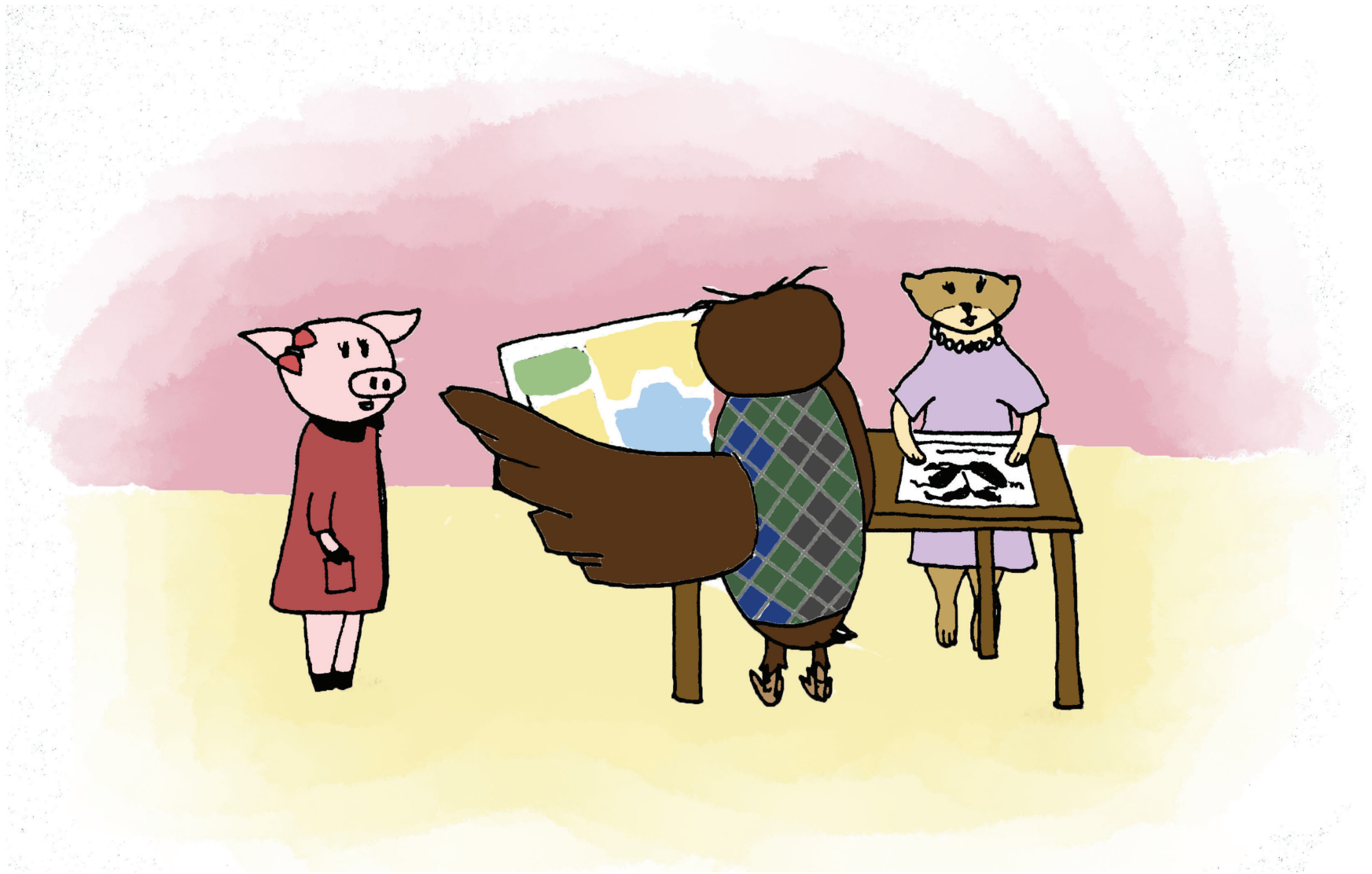
Zoe: "We'll get through this together - all of us!"

LAND USE

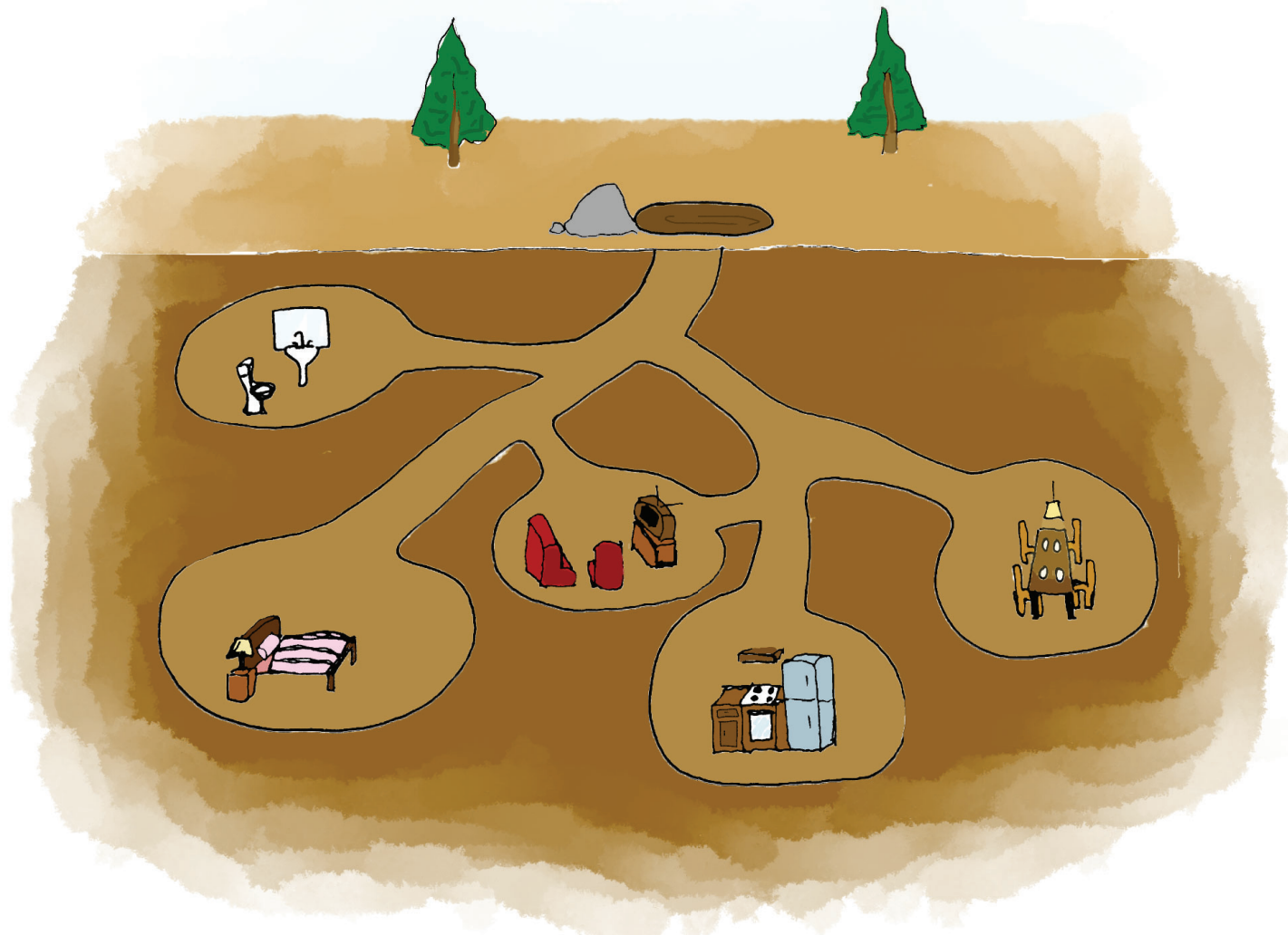
Land Use is how a city manages and uses land.

City planners help to decide where places like schools, parks and homes can be built.



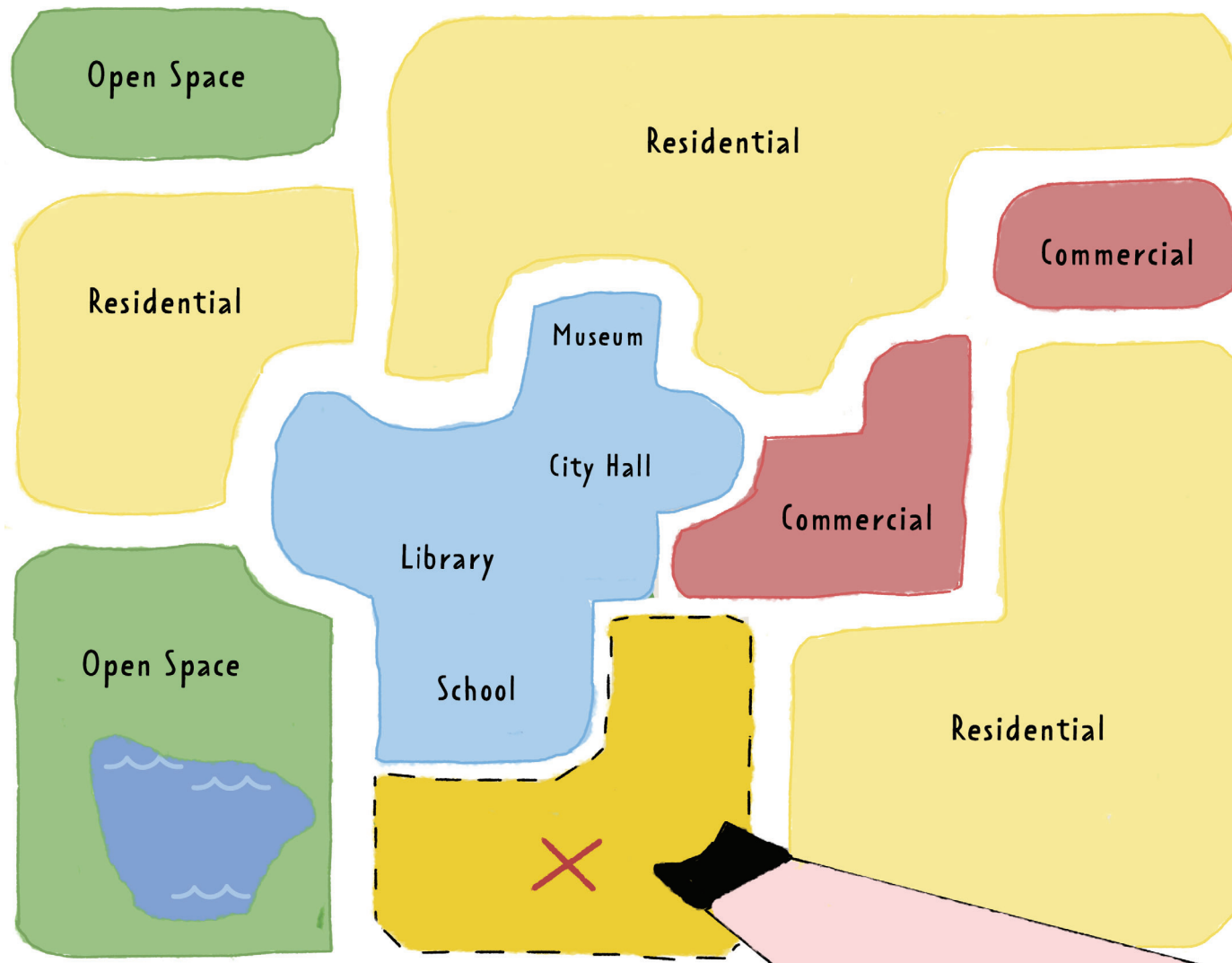


Zoe visits each animal that volunteered to help, starting with Molly and Odin. They show her a map of land uses
Zoe "Hey Molly and Odin, thanks for volunteering - what are you two working on?"



Molly "Hi Zoe! Before I lived in Fauna, I used to live in a burrow with my family. Our burrow had different rooms used for different things, like sleeping, eating, and bathing!"

Odin: "We are thinking of organizing Fauna like the burrow, where parks, homes, and schools have their own place. When the storm comes, we need to know where all the animals are so that we can be able to them to safety."



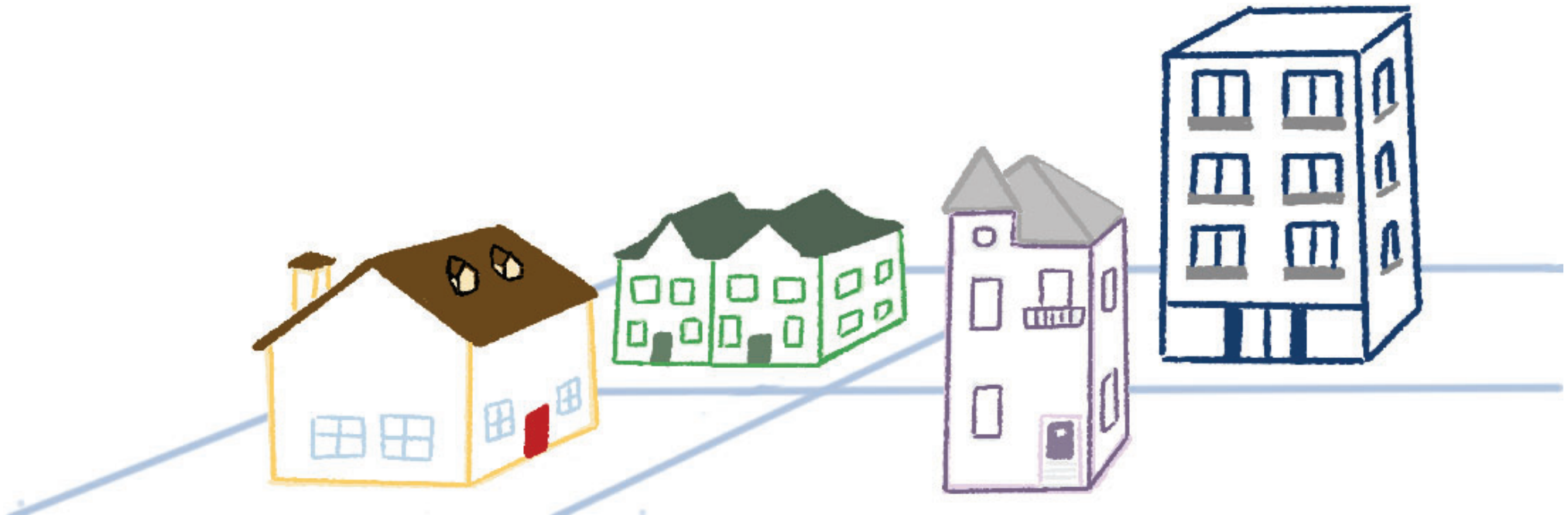
Zoe: "Our biggest problem is that we don't have enough storm-ready homes! Where is the best place to build?"

Odin: "Molly and I believe that these new homes should be built next to Fauna Park. That way, the townsfolk would be a five-minute walk from the park."

Zoe: "Good start - I'll tell the Baileys right away"

HOUSING

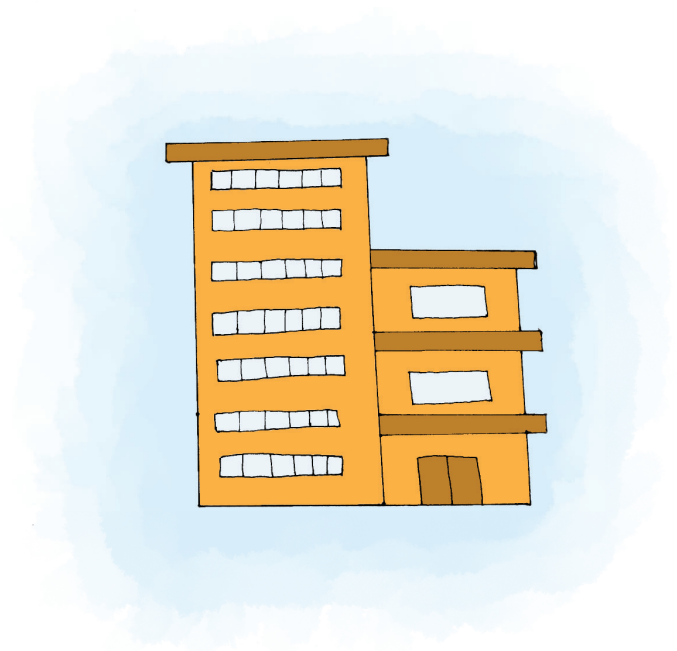
The Housing Element focuses on providing housing for all of the city residents. City planners must also plan ahead for the city's future and population growth.



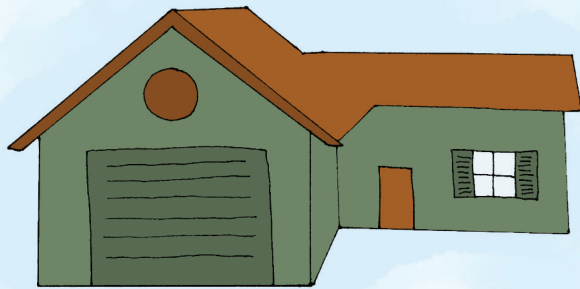
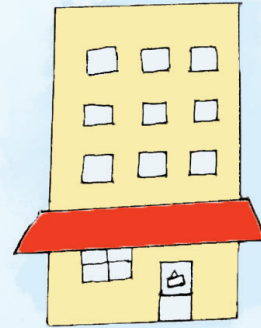
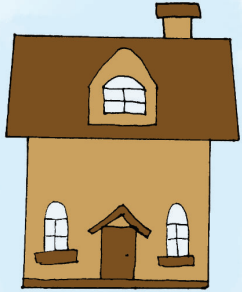


Zoe “It’s the Baileys! Molly and Odin want to organize a map of land use in Fauna. Right now, a lot of the current homes are not ready to handle such a large storm. They’re thinking of placing the new homes across from Fauna Park!

Bailey: “Oh that’s a good idea! Leave it to the pros! We can build these homes stronger than a dam!”



Zoe. "That's great - but we need different types of homes, since every animal has different needs. Here's a list of every animal in Fauna!"
Bailey "Awesome!, these homes will definitely be finished before the storm comes now that we have a plan!"



CONSERVATION

The Conservation Element makes sure habitats like forests and rivers are not damaged as the city grows.
It is a city's duty to protect and preserve their environment.



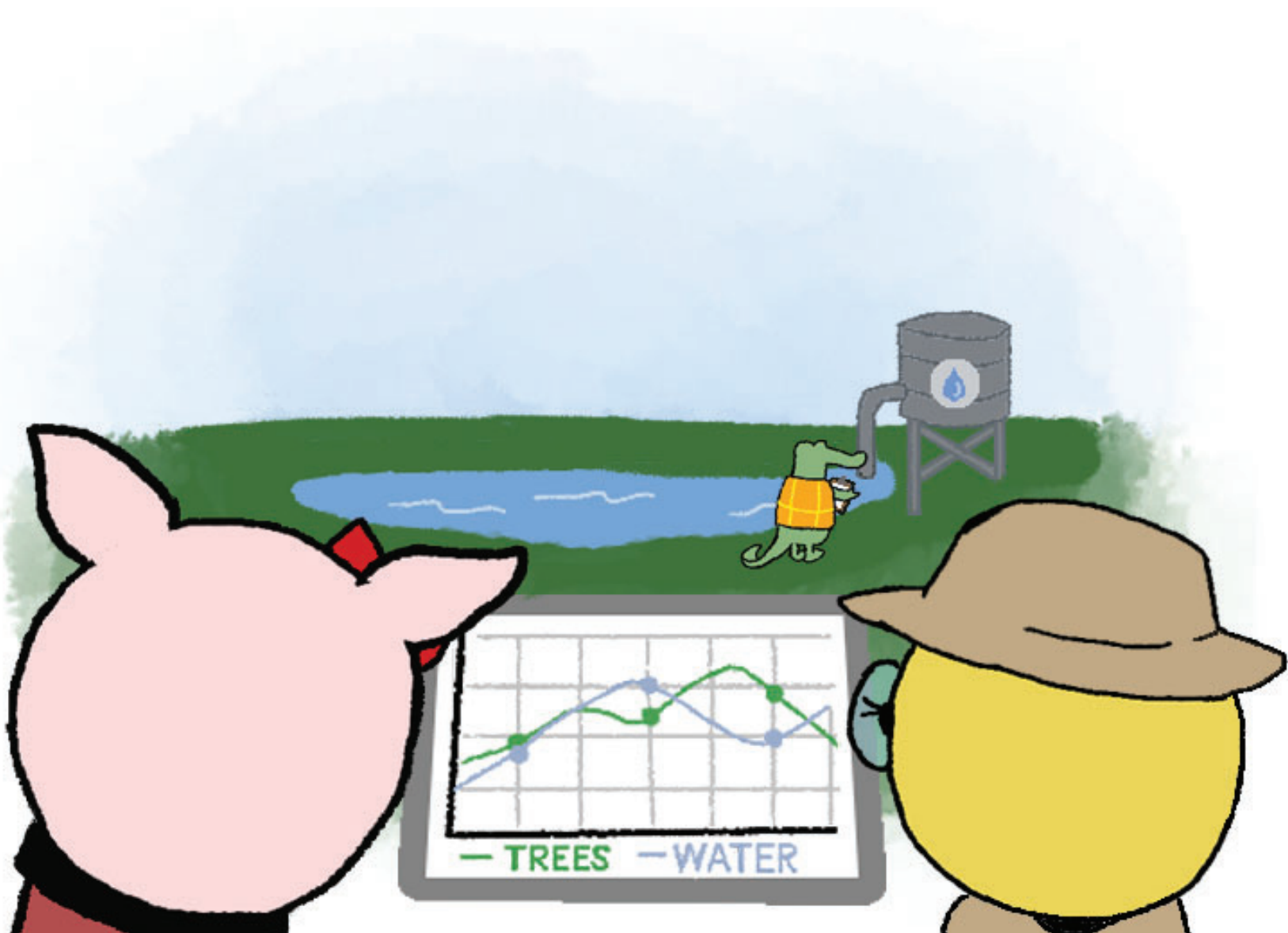


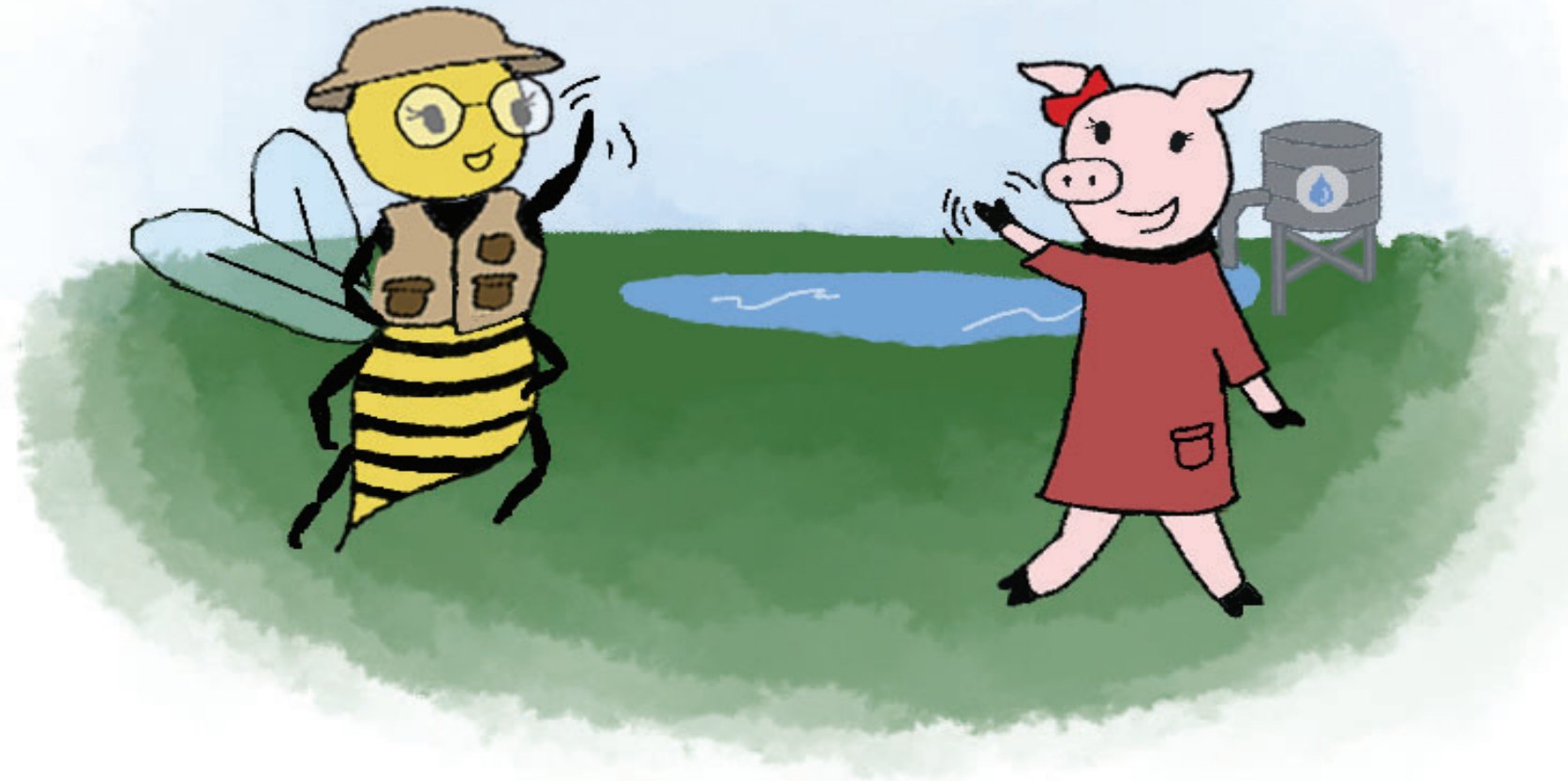
Belle: "What'zzz up, Zzzzoe?"

Zoe: "Hi Belle, we're just stopping by to see how you all were doing!"

Belle: "Thingzzz are going great! Cary and I checking the water supply!"

“We want to make sure that even during the snowstorm, we will still have a steady supply of water. We are also keeping track of the amount of wood that the Baileys are using for the new homes.”





Zoe and Cary wave at each other.

Zoe "Great, we'll be able to build homes while preserving our surrounding forest! With your help, every home in the city will have clean water for cooking, washing up, and drinking!"

Zoe "Speaking of water, let's see our friends at the Fauna Lake"

OPEN SPACE

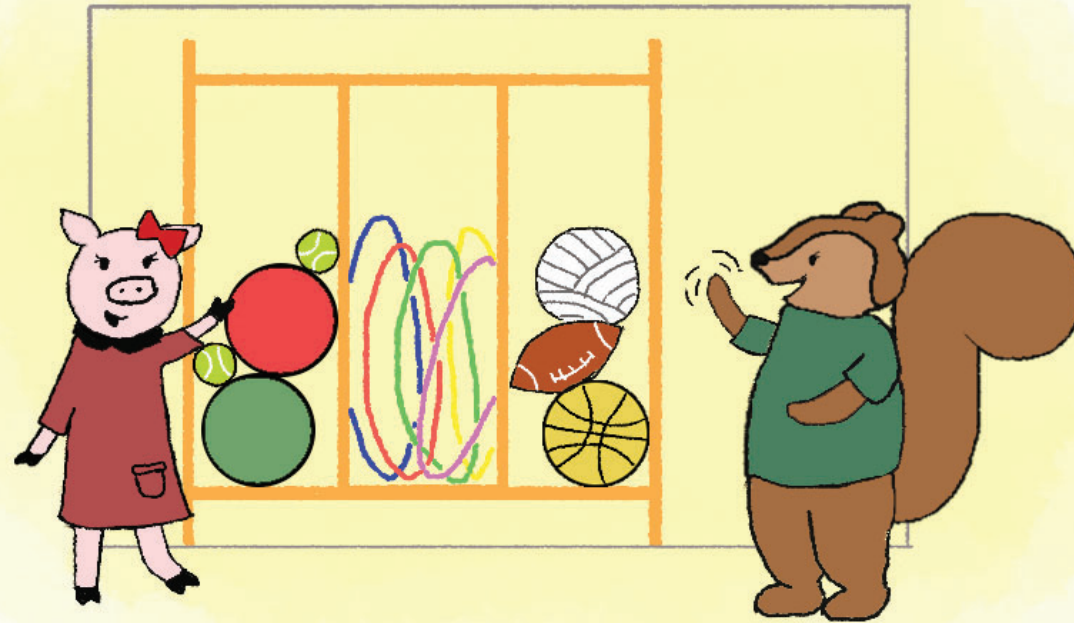
Open Space is an area for anyone to play, relax, and exercise. Cities can have different kinds of open space like playgrounds, sports fields, and parks.





Suzie "Hello, Zoe! How are you feeling after the meeting? We were worried about you!"

Zoe "Hey Suzie! I feel so much better knowing everyone has my back! In the future, I need to remind myself that it's okay to ask for help. But for now, I'd love to hear how your work is going,"



Suzie: "It's good to hear that you are feeling better! Thanks to you, we are on the right path! With the big storm coming, we are moving the sports equipment inside. We wouldn't want them to get lost in the snow!"



Zoe "That's very thoughtful of you!"

Suzie "I can't wait to see everyone playing when it's safe out, but in the meantime, we're prepared for the snow!"

Zoe "Thanks Suzie, Let's go see how Barry and Esther are doing"

SAFETY AND CIRCULATION

The Safety Element makes sure cities are always prepared for emergencies like landslides, earthquakes, fires, and other natural disasters. Circulation connects people to people and people to destinations, whether they walk, bike, or drive.





Barry "Hi there, you've come at just the right time! We could use your advice on something"

Zoe "I'm happy to help - what's the problem?"

Esther "With all this snow heading our way, we aren't sure about how safe our roads are."



Barry: "Yeah, we need to have the snow shoveled before the roads get too dangerous. I'll ask my cousin Peter to help - he's used to this kind of snow."

Zoe "Good thinking - the city can put up "Caution" signs to warn of the dangerous roads.



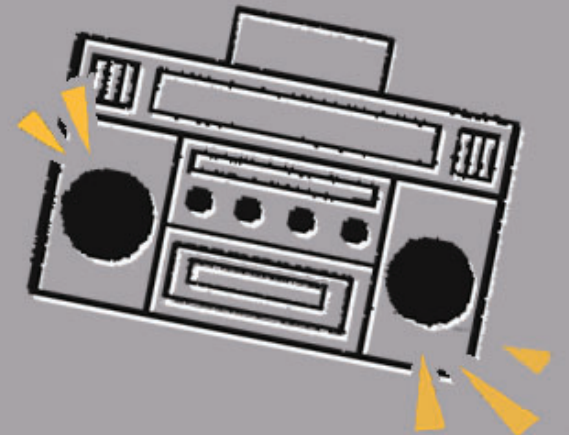
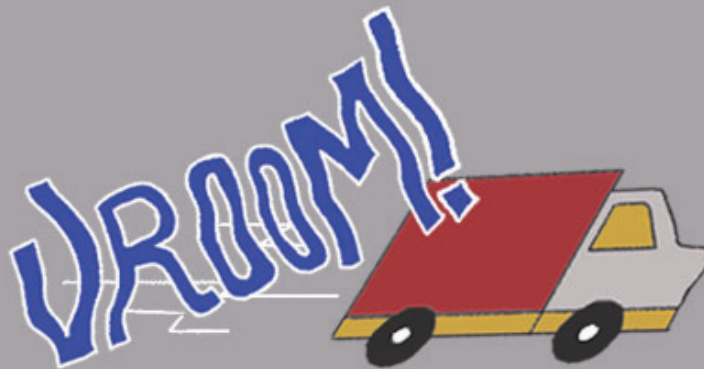
Dash: "Once we finish the new roads, we can tell you where the "Caution" signs can go."

Esther: "This sounds like a plan - let's get to work!"

NOISE

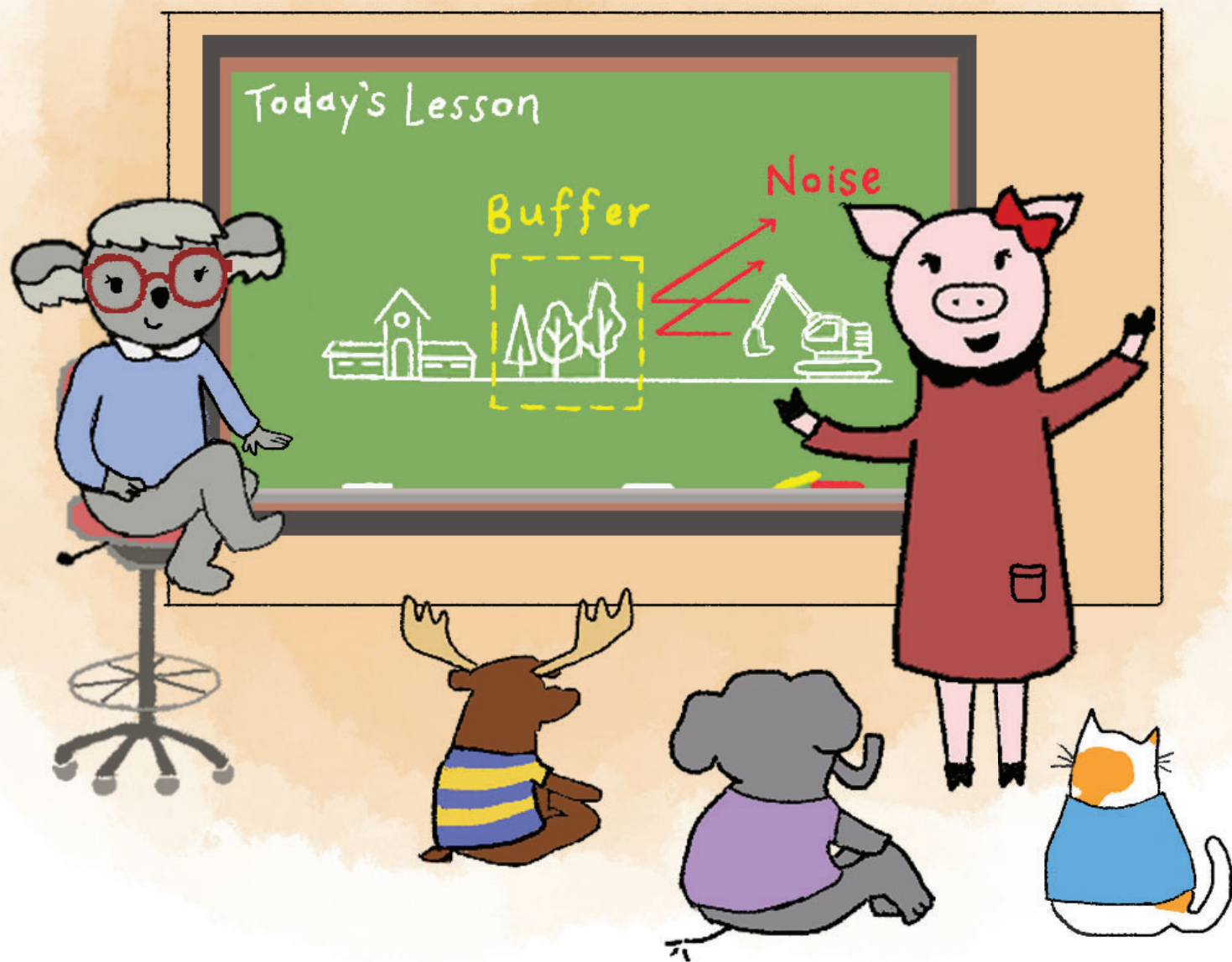


The Noise Element makes sure that we can enjoy quiet time when we want it, especially at night. This means being mindful of where airports are built or when construction can happen.





Zoe: “Hey Ms. Kara, hey kids! As I’m sure you all know, the City of Fauna is preparing for a snow storm. We’ll be doing a lot of construction soon, and I wanted to check in to see what we can do to lessen the noise.



Kara “Everyone say hi to our Mayor Zoe! The kids wanted to pitch in too, and since we’ll be learning about the environment soon, we thought we could plant some trees around the school.

Zoe: “That’s a great idea - those trees can help to soften the noise from the bulldozers and tower cranes.

Zoe thinks, “While I’m in the area, we should get these homes stocked with food for the winter. Let’s pay Elliot a visit!”

ENVIRONMENTAL JUSTICE

Environmental justice means working to make every place safe to enjoy! as the city grows, they need to talk to everyone who can be affected by new buildings. Whether you're big or small, live near or far, everyone deserves to live and play in a safe area.

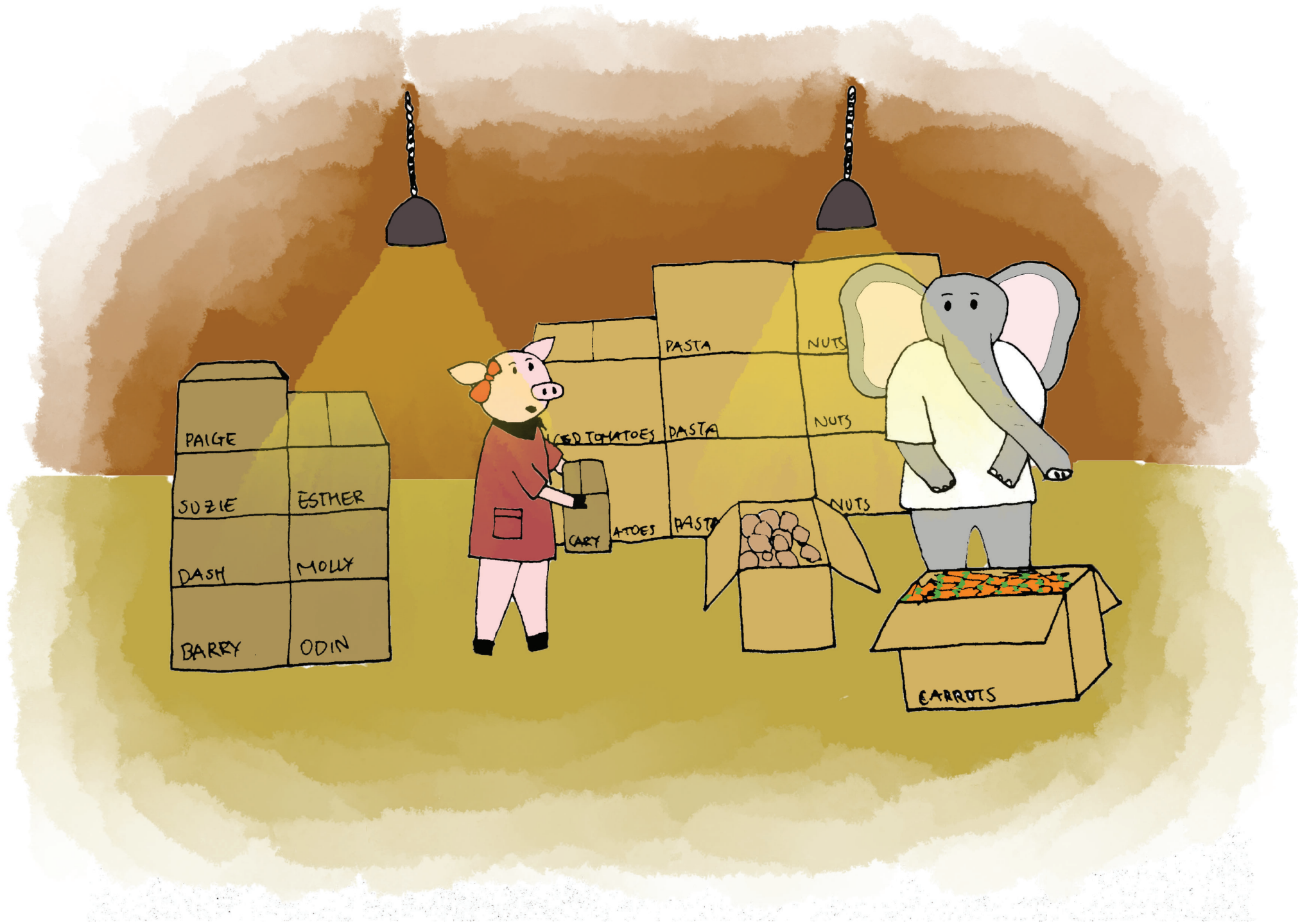


Zoe: "ELLIOT! Are you there?"

Elliot: comes out of a back corner "oh hey Zoe, sorry, I'm just taking stock of the food that we have."

Zoe "No worries, Elliot, I actually came by to see if you needed help!"





Elliot: "Well, you arrived just in time! I've been dividing our supply so that each home receives a hearty amount of food to last the winter!"

Zoe "Perfect - what can I do?"

Elliot "Will you help me organize and label these boxes? I've already started on a box for Cary and his family!"

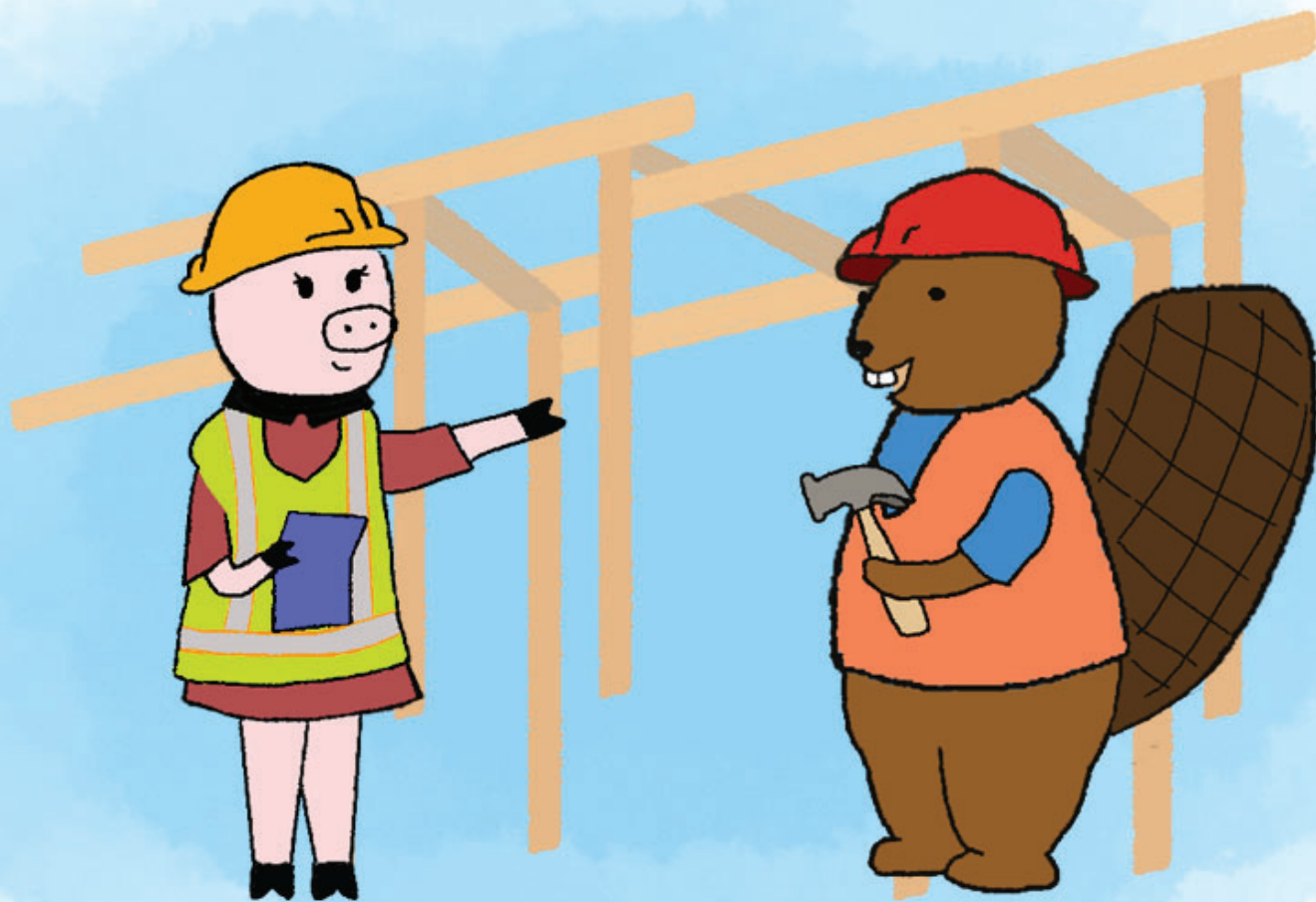
Zoe: "I should get it delivered soon! Once the storm arrives, it might be hard to reach him if the Fauna River floods."

Elliot: "Exactly! It's important that everyone has enough food for the winter"

And they worked...and worked



And worked.



Zoe: "...I think we've done it..."

Delilah: "It's been a long couple days..."

Bailey: "but it looks like we're prepared for the storm!"

Suzie: "This calls for celebration! Gather all the residents of Fauna!"

All: "Yay!"



Zoe speaks to the crowd: “We’ve learned a lot on this adventure, but the most important thing we learned was that you can always ask for help!”

Zoe: “Here’s some last minute announcements! Don’t forget that the roads are super snowy, so be careful if you have to leave your homes.”

Zoe: “Before we let you all go, I wanted to thank you all for your help in preparing for the storm. I know everyone in Fauna appreciates your work, and I wanted to show my thanks with a little party!”

.....The End





Museum

City

WELCOME
City of Fauna

Library

Fauna
Park

School

Fauna
Lake

