

Mother Nature's Fury

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Dear Colleagues,
Dear Parents,

The following children's story deals with a severe flood caused by strong rains – something children have no doubt seen reports of in the media, or may even have witnessed themselves.

In the story, Professor Sneeze embarks on a journey of scientific discovery. In trying to find the most effective ways to conserve energy, Professor Sneeze turns to biomimicry. This science studies how certain life forms in nature carry out processes from which we humans can obtain ideas for solving practical problems, particularly concerning sustainable development.

At the moment there is a lot of research going on in the field of biomimicry. Some of the questions researchers are studying include:

- How does a glass sponge living at the bottom of the ocean in Antarctica produce glass at such low temperatures?
- How do termites build their mounds so that it remains cool in spite of high temperatures outside?

We hope that, as Professor Sneeze learns in the following story, children will also learn to look at the world around them not just simply with a sense of wonder, but that they will also gain a better understanding of it.

There are ten pictures included with this story. For teachers, a good pedagogical activity you might wish to use in conjunction with this story would be to create a matching activity involving the two rows of pictures. In the first row of pictures you find a kangaroo, a duck, a bird in flight, cotton seeds, and a pinecone; in the second row you find flippers, a plane, a parachute, a woman wearing a baby sling, and a tiled roof.

You may wish to photocopy the pictures and post them on a bulletin board or blackboard in the classroom, or perhaps photocopy the page with the pictures and distribute copies to the children.

Following this you could say to the children that in the first row, the pictures are living things you find in nature and in the second row, the pictures are of man-made tools or devices used for certain purposes that look like parts of living things you find in nature. Then have the children match the pictures two by two.

Once the children have finished the exercise, try to have them find other examples of man-made devices that resemble living things or parts of living things you find in nature. Then if you like the children could help Professor sneeze out in his research by sending him a list of things they promise to do to cut energy consumption in their day-to-day lives.

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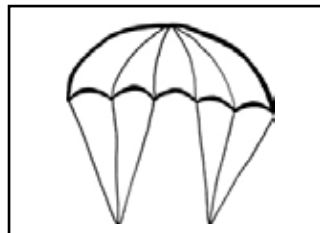
Name :

Try to match up the pictures two by two by drawing a line to connect them

1st row : Living things you find in nature.



2nd row : Man-made devices that look like living things or parts of living things you find in nature.





Professor Sneeze is one of the most absent-minded professors you could ever meet.

Numbers and formulas were running through his head so much this morning when he left to go and work at his laboratory that he didn't notice the present that his children, Curly, Shirley, and Todd, had left for him next to the pitcher of carrot juice in the kitchen.

Professor Sneeze had forgotten that today was his birthday!

Thankfully Lady Trumpet, his wife, had remembered, and was preparing a huge party for her husband tonight. Everyone in Rabbitville had been invited to Professor Sneeze's birthday party. But it's a surprise, so don't give away the secret!



Lots of guests meant she needed lots of time to prepare! This is why Miss Pretty, a teacher at the Rabbitville School, told all her young pupils to collect carrots to help Mrs. Trumpet prepare her delicious recipes.

"Hooray! No schoolwork today!" said Pim.

"Not so fast," Miss Pretty replied. "Along the way we're going to recite our multiplication tables."

"Anything but that!" groaned Scamp, who hates reciting multiplication tables.

Mrs. Trumpet was overjoyed to have help from the children. This meant she would have time to collect some special herbs and spices that would give her cakes that extra special something.

With a last look to make sure that no one had left his or her schoolbag behind on the beautiful beach where the children usually took their recess, Miss Pretty announced, "Off to the forest of Rabbitville! And don't forget your wheelbarrows!"

And then she began to recite: "One times two is two. Two times two is four. Three times two is six..."



All of a sudden, as the young rabbits were finishing up collecting the carrots, dark clouds appeared in the sky and massive drops of rain began to fall.

“Ha ha ha! The rain is washing the carrots for us!” laughed Todd.

“Hurry everyone!” ordered Miss Pretty. “We must get back to the school!” Her whiskers twitched, which usually meant that a severe storm was coming.

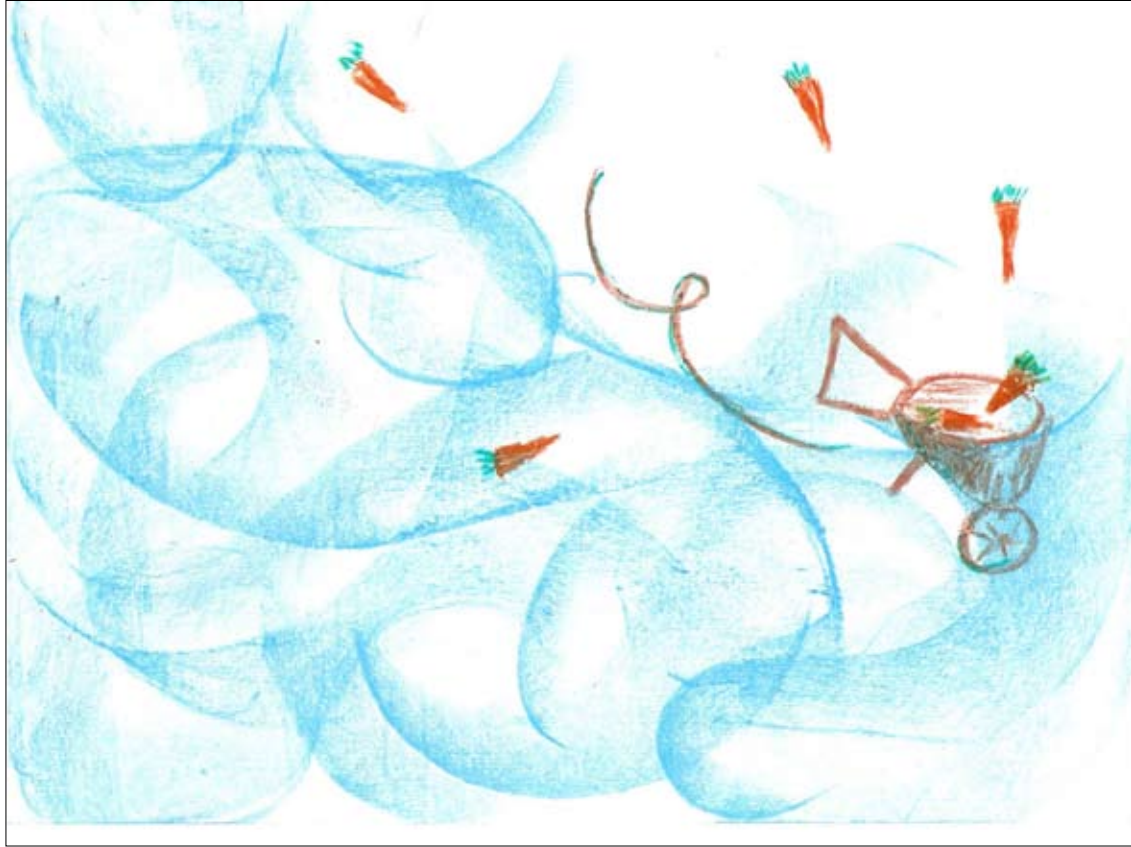
But they were so far from the school and the wheelbarrows were getting heavy from the water that was filling them...



The weather was getting worse. They had to get back to the school. They marched along faster and faster.

To keep the rhythm and to hide the fact that she was a little bit afraid, Miss Pretty began to recite the multiplication tables again: "One times three is three. Two times three is six. Three times three is nine...."

Huge lightning bolts lit up the sky and the rain was falling so hard that after a while, the ground became completely saturated and the water began to rise all around them.



Soon water was everywhere, and the situation was becoming quite ugly. The water lifted up the wheelbarrow full of carrots and carried it away. Curly and Shirley were tossed around by the rising water.

Without betraying her fear, Miss Pretty took a mountain climber's rope out of her bag and tossed it towards the children, shouting, "Everyone grab on to the rope!" Miss Pretty swam around making sure all the young rabbits were secured.

Miss Pretty was relieved that no one had been lost. "But how shall we get back to the school?" she wondered.

Then suddenly an idea came to her. She opened her enormous umbrella and turned it upside-down. It floated! She could use it as a boat! She grabbed three young rabbits and helped them into her improvised boat.

Everyone else who had an umbrella opened theirs up and they all got inside their own makeshift boat.

Miss Pretty and her pupils were desperately trying not to be swept away by the water. The rain also began filling the umbrellas with water, so Miss Pretty showed the young rabbits how to cup their paws to empty their umbrellas.



In Rabbitville everyone was in a panic. Water was everywhere, flooding everyone's houses, and many rabbits had to climb up onto their roofs to keep from drowning.

All of a sudden, a loud noise shook the village. A huge mudslide had crushed Dr. Shrimp's house and the floodwaters swept away what remained of it!

"Oh dear! If my friend was inside, he could have been hurt! Or worse!" Professor Sneeze said to himself as he watched the tragedy unfold before his eyes. "I must go see if he's all right!"



Then the telephone rang. It was Dr. Shrimp. Thankfully he was paying a visit to his explorer friends, Breakneck and Reckless. Dr. Shrimp was shocked to hear what had happened to his house.

"We can use our expedition sledges as boats to rescue everyone from the roofs of their houses," announced Breakneck.

"Then we'll set up our expedition tents on top of the hill," added Reckless. "They're waterproof and the floodwaters will never be able to reach that high."

Dr. Shrimp, Breakneck and Reckless worked for hours in the pouring rain and rushing water to get everyone to safety. With their fur completely soaked, they felt heavy and exhausted.

Suddenly Professor Sneeze noticed that the children were missing. "Where are they?" he wondered.

No one had seen them. The residents of Rabbitville were starting to worry.



After a while of seeing the destruction going on around him, Professor Sneeze could take it no longer and decided to give the residents of Rabbitville a piece of his mind.

"I told you that it was important to use less energy! I told you to shut off lights and appliances when you weren't using them! I told you we all had to drive less and use alternative means of transportation! But no! You wouldn't listen to me! Now we're facing the full fury of Mother Nature!"

"But that's impossible! We've been paying attention all along!" Breakneck exclaimed. "Weren't we doing enough?"

"Stop fighting you two!" interjected Chives the Seagull. "I think I see someone coming!"



A convoy of shaken but safe schoolchildren floating on upside-down umbrellas had finally found their way back to the Rabbitville School. Unfortunately, upon their arrival, they found that the school had been destroyed during the storm.

Behind the children was Mrs. Trumpet, floating through the water, clutching a huge floating block of wood. "Help me!" she cried.

It didn't take long for Breakneck and Reckless to bring everyone to safety on the hill. Thankfully no one in Rabbitville had been hurt.

"I'm terribly sorry," said Miss Pretty, dripping wet. "We weren't able to bring back any carrots to make goodies for the birthday party."

"Birthday party? What's all this about a birthday party?" demanded Professor Sneeze.

"Why, your birthday party, you absent-minded old rabbit!" Miss Pretty exclaimed.

"Oh my goodness! I'd completely forgotten!"

Professor Sneeze continued to worry about the force of the storm.



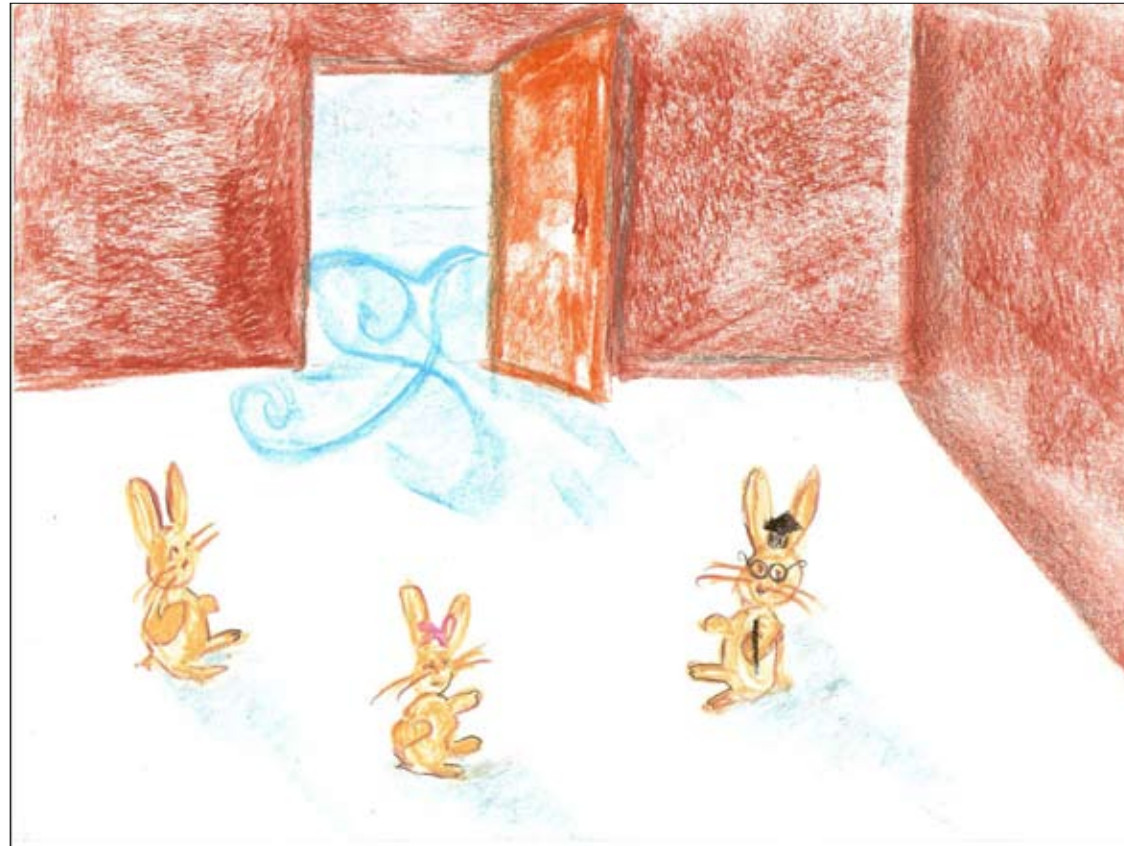
Then all of a sudden the end of Professor Sneeze's nose began to twitch. With his fur completely soaked he'd caught cold.

"Aaa – aaaa – aaaaaaaa-choooooo!" went Professor Sneeze.

"Oh dear!" worried Mrs. Trumpet. "When Professor Sneeze catches cold, so does everyone else!"

Within a few hours, all you could hear inside the tents was the sound of rabbits sneezing. "Aaa-choo! Aaachoo! Aaachoo!"

But all the sneezing going on around him didn't keep the gears in Professor Sneeze's brain from turning. He continued to think about their situation.



"Water is everywhere...it must mean something!" Professor sneeze managed to say in between sneezes. "The solution must be linked to water! I'm sure of it!"

Once Professor Sneeze fixes on a particular idea it's impossible for him to let go of it. So he decided to ask Dr. Shrimp, Breakneck and Reckless to head immediately for the cold waters of the Antarctic where many different and unique sea creatures live. "Perhaps by studying how the sea creatures down there live," thought Dr. Sneeze, "We might be able to find a solution to our problems."

"But my house!" complained Dr. Shrimp. "I've lost everything!"

"Don't worry! I'll rebuild it for you!" Professor Sneeze exclaimed, impatient to see them get started on their mission. "Just get a move on!"

Dr. Shrimp thought for a moment about Professor Sneeze's offer. "Professor Sneeze is too absent-minded to rebuild a house properly." He muttered to himself. "He'll probably forget to put doors or windows in the thing. He might even forget to put a chimney."

"Don't worry," said Mrs. Pretty, who had noticed that Dr. Shrimp was a bit troubled. "Everyone in the village will help him. I'll even decorate your new house for you."

Reassured, Dr. Shrimp got ready to leave with Breakneck and Reckless, who were waiting and ready in their boat to leave on the adventure, just as they always are. The long voyage to Antarctica was about to begin!



This new course of action seemed to calm Mother Nature down a bit. The winds began to die down and the floodwaters began to recede.

It was not long before everyone in Rabbitville was able to go back to what was left of their houses. They took out their mops and their buckets along with other cleaning instruments and began putting their tranquil little village back in order once again.



A month later (everyone knows it takes at least a month to get to Antarctica by boat!), after arriving at their destination, Breakneck decided to use his special satellite phone to call Professor Sneeze and tell him that he had found a place in the icy waters of the Southern Ocean to go diving.

An excited Professor Sneeze asked, "Is Dr. Shrimp going to dive?"

"No, Professor Sneeze. I'll be diving today," Breakneck responded. "You see, Professor, these last few days the weather has been quite rough down here, and Dr. Shrimp has fallen ill, so I thought it would be best if I took his place - *"

Professor Sneeze could not hear the rest of what Breakneck said, as the satellite connection was suddenly cut off.



"This is amazing!" thought Breakneck to himself as he swam amidst the strange underwater creatures he found all around him. He made sure to remember everything he saw in detail so he could tell Dr. Shrimp about it later.

All of a sudden, hundreds of shrimp that had been swimming around him scampered away. They had sensed something enormous was coming. Breakneck turned around to find an enormous whale swimming towards him!



As an experienced explorer, Breakneck knew he had to act quickly. "I'll hide behind this huge curtain of seaweed!" he thought to himself as he swam quickly towards the green curtain, his flippers flapping wildly. Soon Breakneck was well hidden.

But then as he moved his flippers against the bottom of the ocean he heard a tiny voice cry:

"Ouch! Watch what you're doing!" cried a glass sponge directly beneath Breakneck's flippers.



Breakneck panicked. "It's too dangerous down here!" he thought to himself. "I must head back."

"Sniff sniff! That hurt! You've broken my glass skeleton!" complained the glass sponge.

As he heard the glass sponge's moans, Breakneck swam quickly back to the boat. He needed Dr. Shrimp's advice.

Breakneck came back to the boat in a total panic, rambling on about the whale he'd seen. "Don't be silly!" laughed Dr. Shrimp, amused at Breakneck's state of panic. "Whales eat shrimp, not rabbits!"

But as soon as Breakneck told him about the glass sponge he'd accidentally hurt with his flippers, Dr. Shrimp insisted on going down with Breakneck on another dive. Since Reckless didn't want to stay on the boat alone, he decided to join them.



"Good grief! Not more of those bumbling idiots!" complained the glass sponges as they watched the three divers approaching. "They're going to break us all!"

"I'm so sorry! I didn't do it on purpose!" Breakneck tried to explain.

Dr. Shrimp hadn't seen a sponge before with a skeleton made out of glass. "Fascinating!" he exclaimed.

"Back in Rabbitville, in order to make glass, we must use very hot ovens. It takes a lot of energy to heat those ovens. But down here, in the cold waters of the Southern Ocean, sponges can create a glass skeleton without using any heat whatsoever! Remarkable! I must show Professor Sneeze. He'll certainly find this quite interesting!

Two sponges who liked the idea of travelling to another part of the world agreed to go back to Rabbitville with Breakneck, Reckless, and Dr. Shrimp. Dr. Shrimp kept them comfortable during the journey by giving them a nice, comfortable aquarium filled with icy-cold water.



Back in Rabbitville, Professor Sneeze continued thinking about solutions during his regular walks along the sea. "By imitating nature, surely we'll be able to find a solution to global warming," he often repeated to himself.

During one of his "thinking" walks along the beach, an idea struck Professor Sneeze as he picked up a handful of shells he found lying on the sand.

"How can shellfish build their own houses without polluting like we do?" Professor Sneeze wondered. He decided to take the shells to his laboratory to study them further.

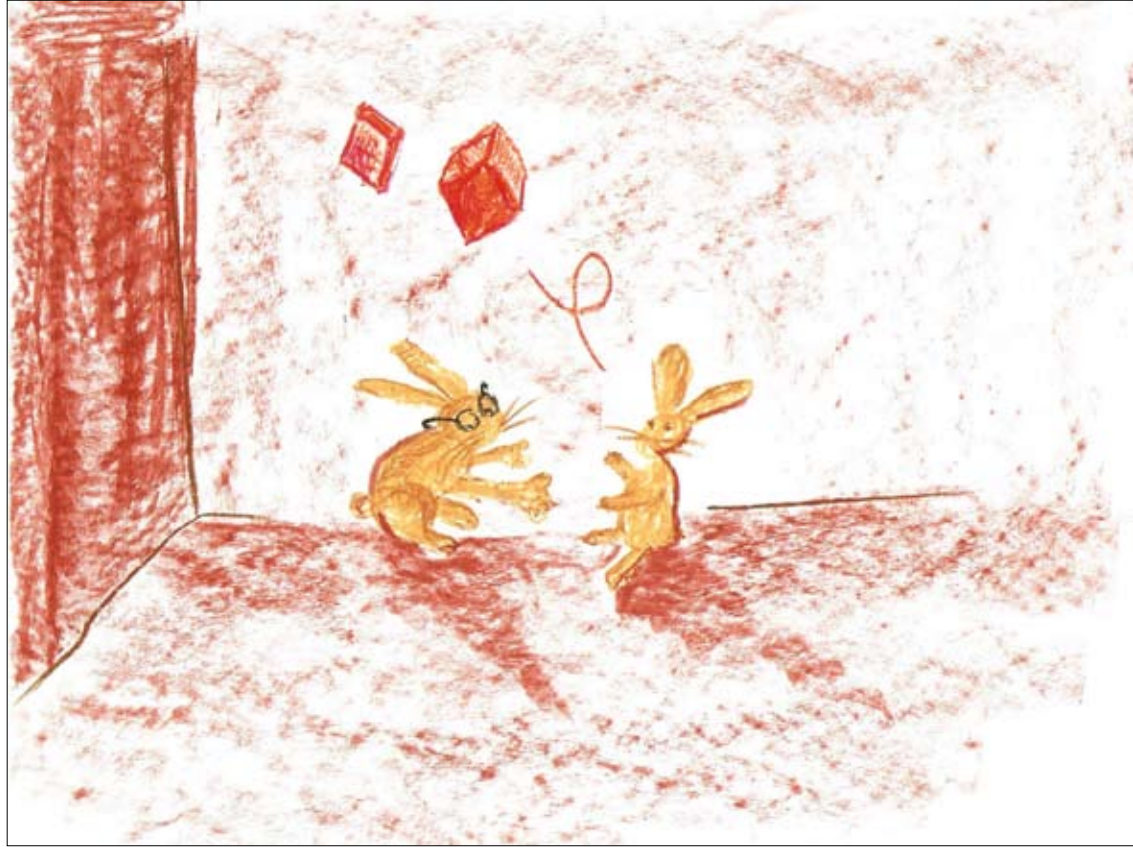


It was not long before Professor Sneeze figured out how shellfish build their own houses. They use certain gasses dissolved in seawater, and what's more, they use the very same gasses that are causing global warming to make their shells!

"If only I could figure out how to do this myself..." Professor Sneeze wondered.

"My maritime cousins build their own houses using gasses dissolved in the ocean water," a small voice that came from the window chimed in. "It's a hard process."

Professor Sneeze jumped as he turned to see sitting on the window sill a beautiful snail, which, being a bit timid and alarmed that she had startled Professor Sneeze with her comment, retreated inside her shell.



"We're back!" said a voice from the door. Professor Sneeze jumped again.

He turned and saw Dr. Shrimp, Breakneck, and Reckless entering the laboratory. Professor Sneeze was so glad to see them that as he ran to greet them, he almost made Dr. Shrimp drop the aquarium that was holding the glass sponge.

"Be careful! A glass sponge has a very fragile skeleton!"

"I'm so sorry! I'm so excited to see you! Please tell me about everything you saw on your expedition!" Professor Sneeze listened attentively as Dr. Shrimp and the two explorers recounted what they'd found on their dive in the cold waters of the Antarctic.



"Biomimicry! That's the answer!" declared Professor Sneeze.

"Bio-what?" inquired a puzzled Reckless.

"Biomimicry of course!" replied Professor Sneeze, twirling his whiskers. "This means we could imitate the process that a glass sponge uses to make its glass skeleton in order to make windows for our houses. And to build the walls of our houses we could copy the processes shellfish and snails use to build their shells!"

"Oh I see what you mean!" said an enlightened Dr. Shrimp. "'Bio' means 'life,' and 'mimic' means 'imitate.' So biomimicry means imitating what living creatures do in nature."

"Yes! You've got it!" Dr. Sneeze replied.

"Oh – um – by the way." Dr. Sneeze added as Dr. Shrimp listened, knowing exactly what his friend was about to say. "I haven't quite finished rebuilding your house yet....but you can stay here in my laboratory and help me figure out how to use biomimicry to our advantage. We'll get other researchers to help us!"

"I knew you weren't going to finish my house before I got back, old friend, but I'd be more than happy to help you investigate this biomimicry idea you've got!" replied Dr. Shrimp, who was eager to discover the secrets of the glass sponge.



Fascinated by the glass sponge, Professor Sneeze tuned out everything and everyone around him as he began his work.

While Professor Sneeze was lost in his work, Dr. Shrimp looked around the laboratory for a place to set up his equipment.

"Our work here is done," declared Reckless. "Now all there is to do is wait for them to find a solution."

"No," said Breakneck. "Scientific research takes a long time. In the meantime, we can go around reminding people of how important it is to save energy."

Mother Nature was so happy with the residents of Rabbitville that she expressed her joy by displaying one of her most beautiful rainbows over the cozy village of Rabbitville.

Tell me and I shall forget, show me and I shall remember, involve me and I shall understand."

OLD PROVERB, ORIGIN UNKNOWN

Dedicated to my godfather and my grandmother, and all those who
enjoy sharing their wisdom with the young.

Shoulder to shoulder we discover and
share ideals that are important to pass on to younger generations:

A warm

“Thank you”

- To Dr. Gauthier Chapelle, marine biologist and Secretary General of the non-profit organisation Biomimicry Europa
- To Alain Hubert, polar explorer and President of the International Polar Foundation
- To Thierry Touchais, Executive Director of the International Polar Foundation
- To Sandra Van Hove, Director of the Education Department at the International Polar Foundation

D/2008/M.Dielemans, éditeur.



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