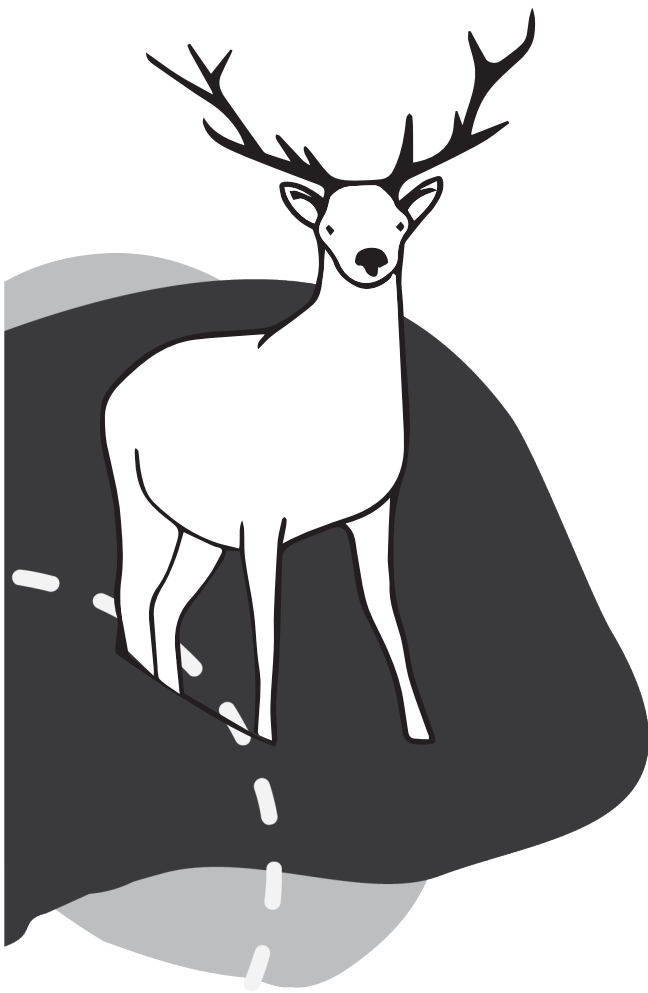


WISE Activity Booklets

A STEM activity booklet for fun on-the-go learning!
Made by WISE Kid-Netic Energy



University
of Manitoba

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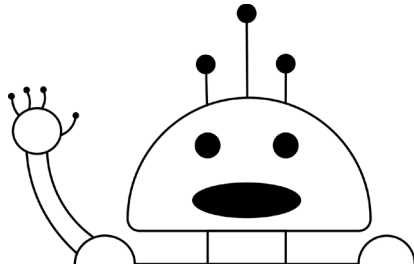
With funding from
Canada

DIY Activities
Puzzles
Challenges
... and more!



Grades K-1
MAY 2020

Trees - Colours - Paper - Living Things
The 5 Senses - Material Science
Daily and Seasonal Changes



Hello there!

WISE Kid-Netic Energy is a not for profit STEM (Science, Technology, Engineering, and Math) outreach organization at the University of Manitoba. Our organization offers science and engineering workshops, clubs, camps and events to youth from Kindergarten to Grade 12 throughout the province of Manitoba. We reach on average 25 000 to 50 000 youth depending on funding levels. Our approach is simple – present STEM in messy, memorable and engaging ways so Manitoba youth feel motivated to learn more and more. We reach all Manitoba youth, and we particularly target underrepresented youth like girls, indigenous youth and youth facing socio-economic challenges.

All of us at WISE Kid-Netic Energy have been working hard to create these booklets to continue to bring our fun and educational STEM activities to Manitoba youth during these unprecedented times. We are disappointed that we cannot see you in person, and hope that these monthly booklets bring some STEM excitement to your life.

These booklets have been created by our student instructors who are all studying engineering, science, or in another STEM-related field at university. Peek the last page of this booklet to see who created the activities, experiments and recipes within.

All the activities in this booklet are based on the Manitoba Science curriculum. For any teachers viewing this booklet, all the SLO codes are listed at the bottom of each page.

If a link is listed at the bottom of the page, and you have access to the Internet, follow it to check out a video of the activity our instructors have created just for you.

We hope that you enjoy doing the experiments and activities as much as we loved creating them for you.

In this Grade K-1 booklet, the science topics you will be exploring are: trees, colours, paper, living things, our five senses, material science & daily and seasonal changes!

**Best of luck, and until we see you again,
the WISE Kid-Netic Energy Crew**

P.S. If you have any suggestions for activities or experiments you would like us to try, contact us through our website, or social media accounts that are listed on the last page of this booklet.

Meet our Amazing Authors!

Brenna is in her second year of mechanical engineering and loves science, especially physics! In her free time she likes to paint or draw, see friends, and play with her dog

Brenna

Kajal

Kajal is in her first year of Computer Science and is pursuing a Bachelors of Computer Science. She loves to read, sketch, and make things. She is excited to visit new places across Manitoba and work with kids!

Katy has completed her second year of Biosystems Engineering at the University of Manitoba and is passionate about environmental sustainability and working with kids. In her spare time she enjoys running, painting, and spending time outside.

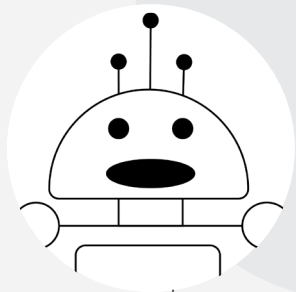
Katy

Toni

Toni is in her final year of study as a social work student at the University of Manitoba and she hopes to one day work in community development. Toni loves learning and teaching and is excited to join the WISE team this upcoming summer.

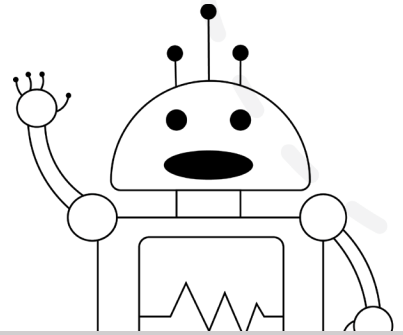
Esiw the Robot

Esiw is a friendly robot that loves to help kids learn about computers & coding! Esiw loves to do math, solve problems and make people laugh!

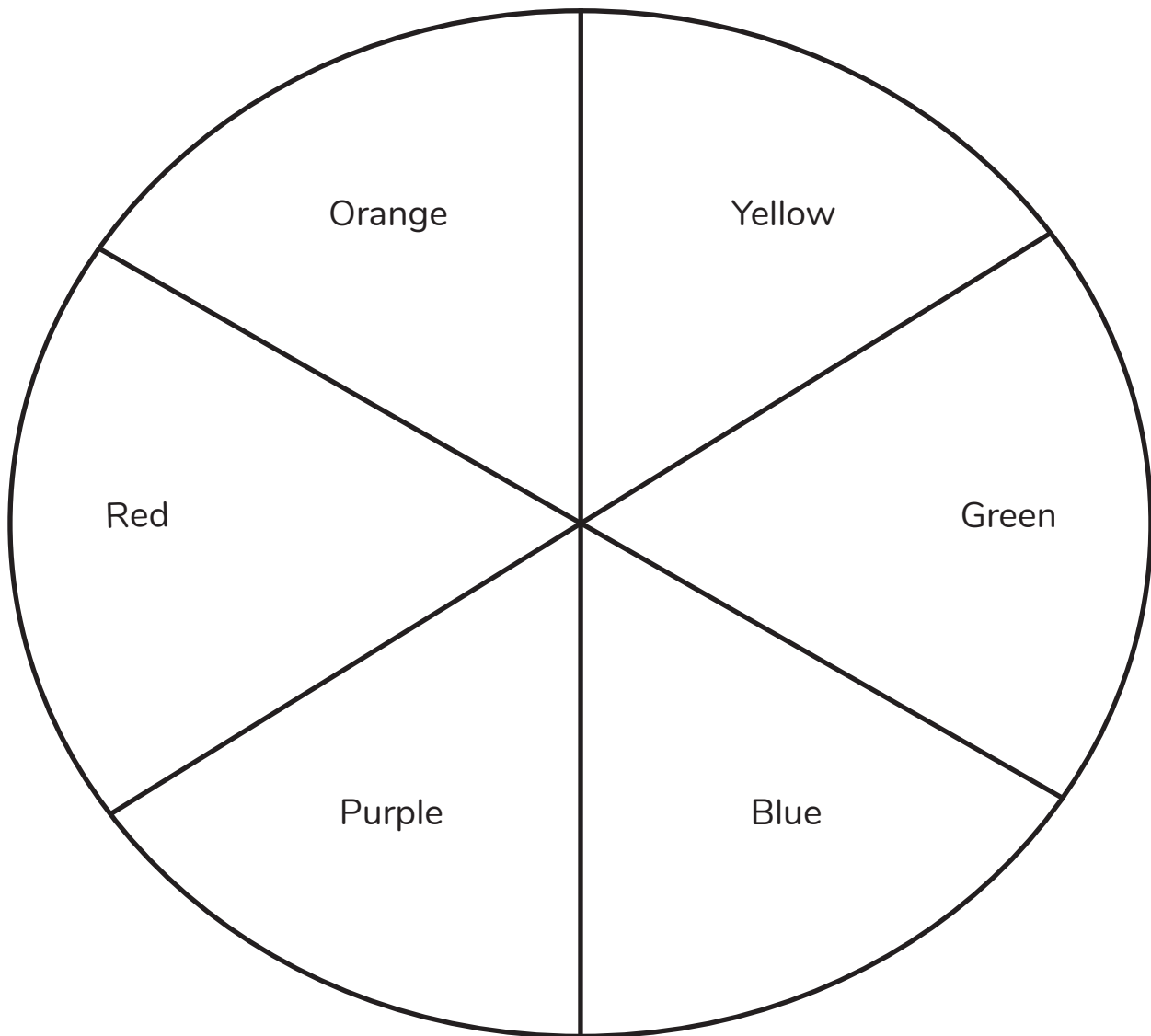


Let's Learn More About Colours!

I want to collect data on and learn more about colours! Can you help me?



This is the colour wheel. It shows the colours red, orange, yellow, green, blue and purple. The order of the colour wheel is important because each colour is across from the colour that it **contrasts**, meaning they are very different from each other.

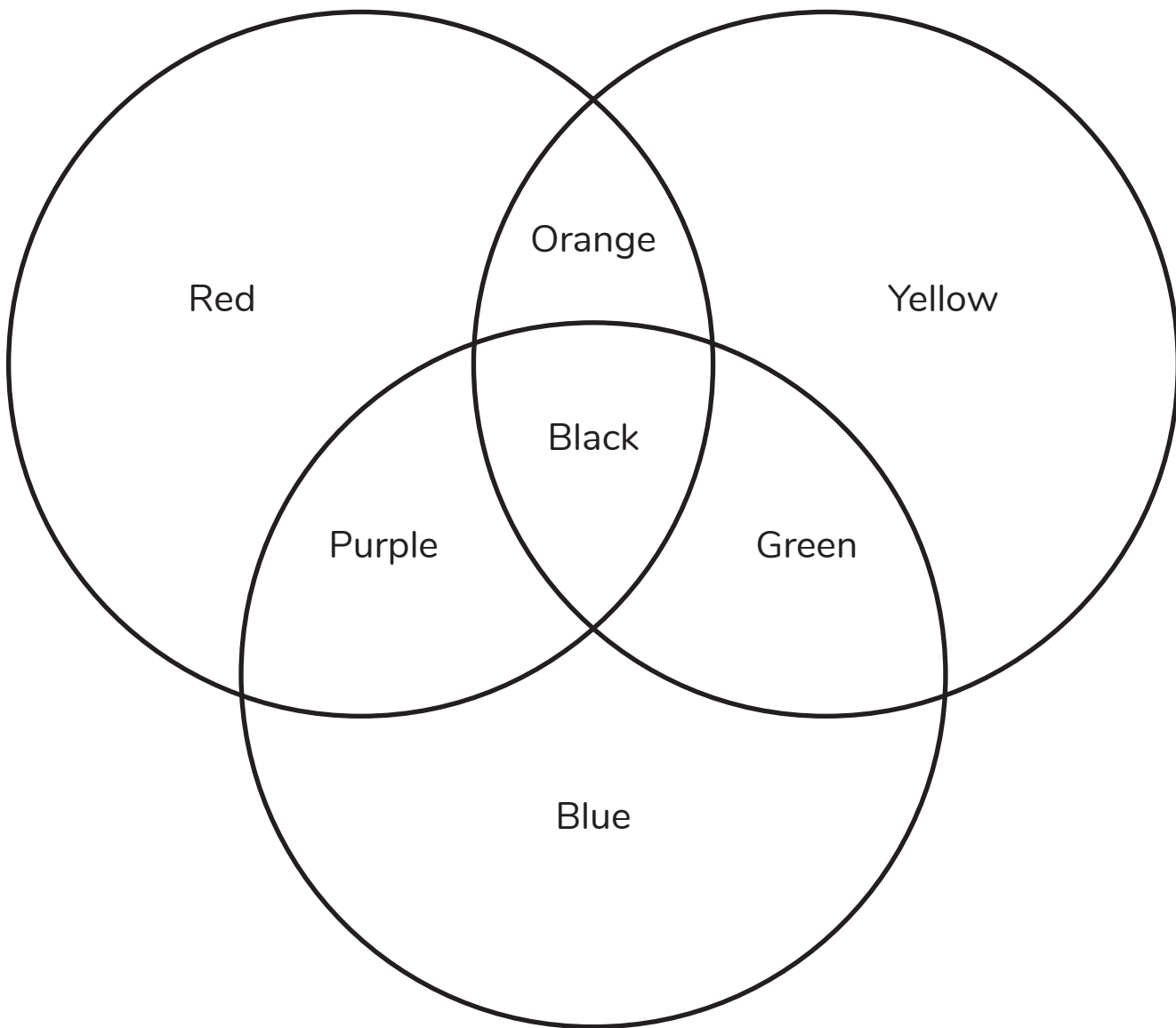


Colour in the circle above.
Which colour is your favourite?

This page was created by Toni.

Red, yellow and blue are very important because you can mix them to create new colours. They are called **primary colours**.

Orange, green and purple are colours that are created by mixing primary colours. They are called **secondary colours**.



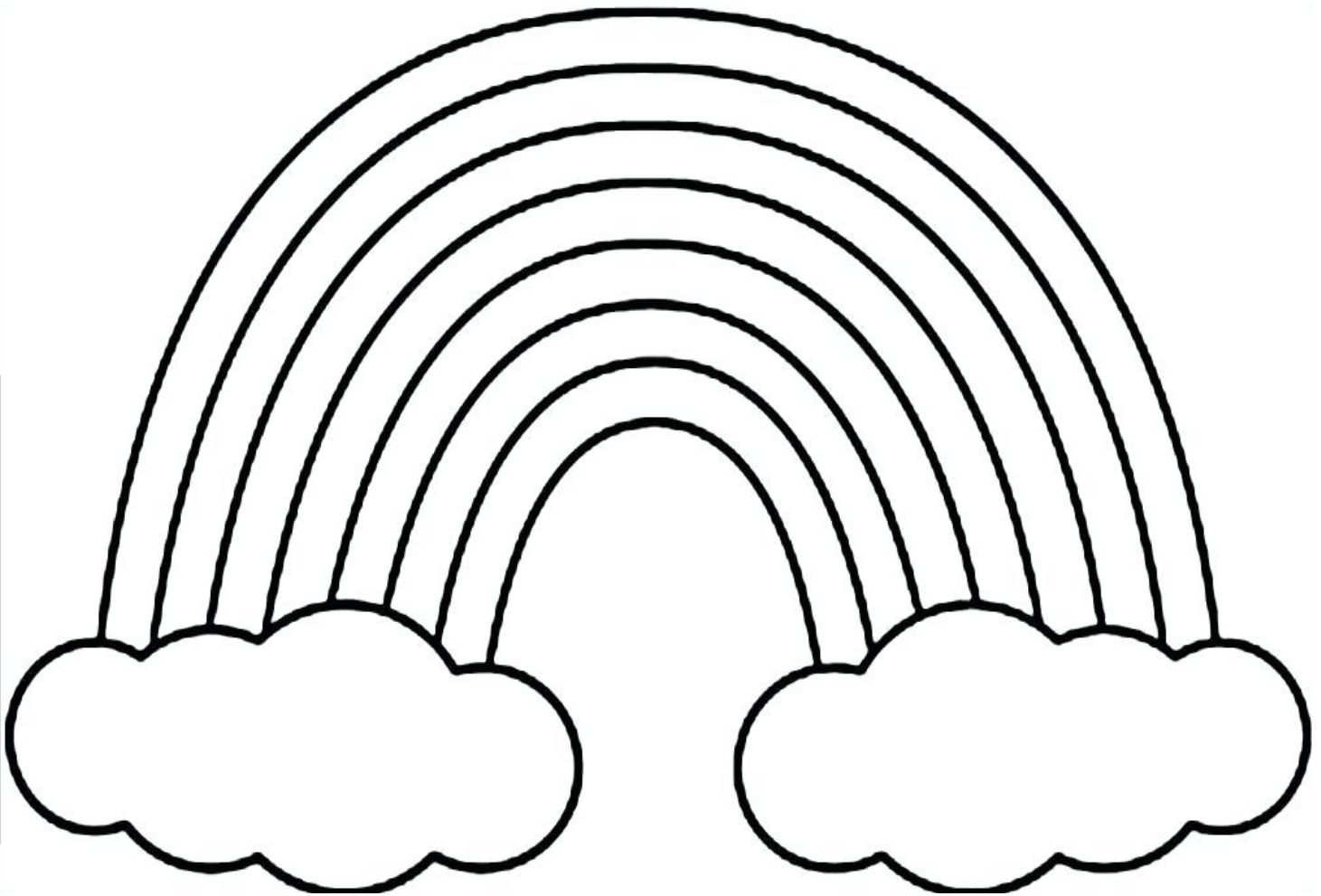
Colour in the circle above.

Which primary colours do you combine to make which secondary colours?

Rainbows

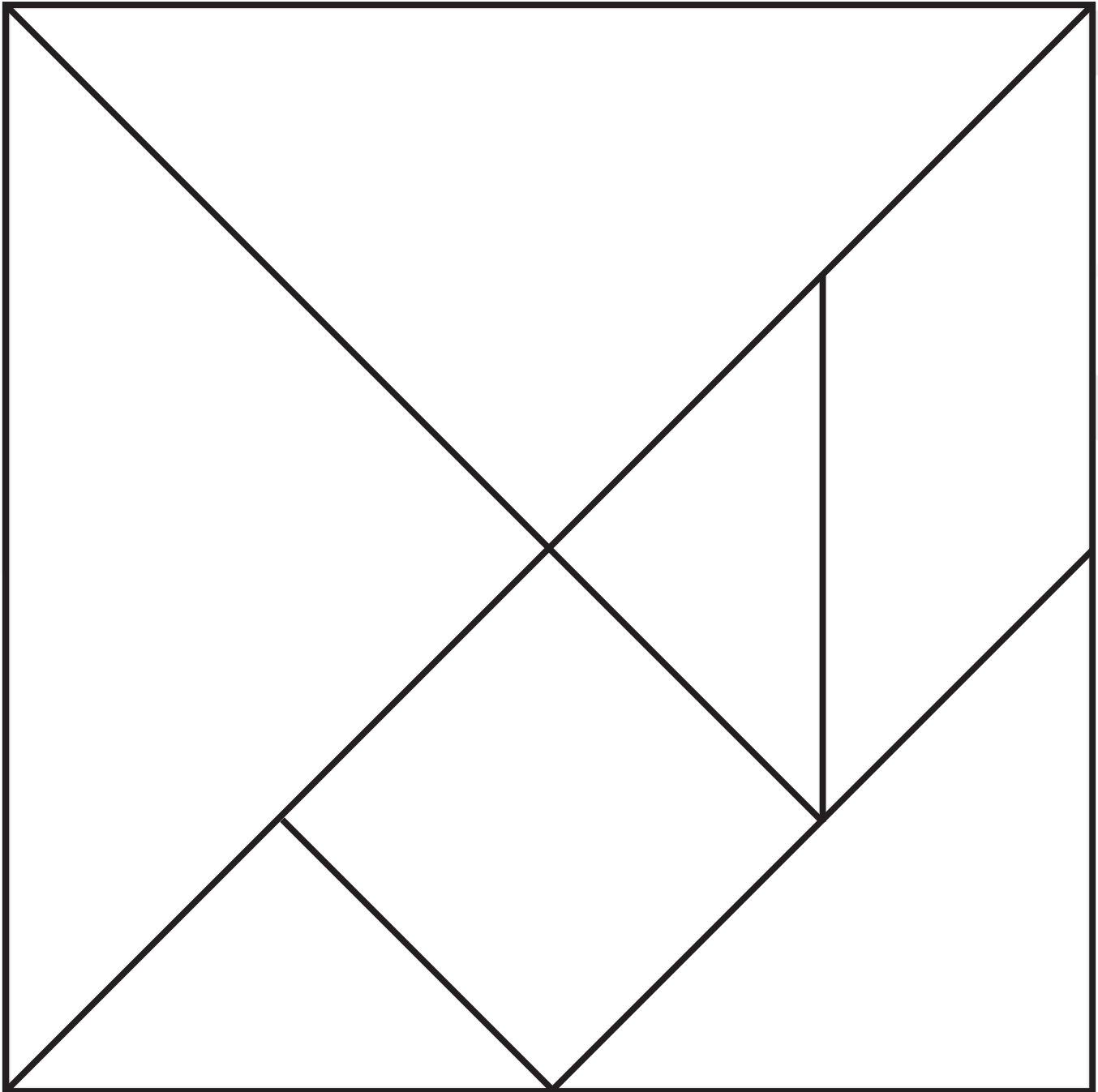
Rainbows are multi-coloured arcs that form when light shines through water. Rainbows show seven colours in a specific order. The colours go from red at the top, orange, yellow, green, blue, indigo and purple at the bottom.

Can you colour the arcs below in the right order?
What do you think Indigo looks like?



Tangram

Cut out the shapes you see in the box below. Try using them together to make different objects. Can you make try and make: a house? a tree? a cat?



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The Adventures of Esiw and Kitty: The Broken Cloak

Esiw needs your help on this adventure! You can ask a family member or friend to read this bedtime story to you. Help guide Esiw and Kitty through the tale by picking the right materials.

Once upon a time, there was a robot named Esiw who lived on a small island with their mom and their kitty named Kitty. Esiw loved new things and learning about humans and Kitty loved the sun.

One morning, Esiw noticed a hole in their cloak, so they started to hate the cloak because it wasn't new anymore! Esiw's mom offered to fix it for them but Esiw wanted a new one instead. So Esiw and Kitty decided to sail off to find a brand new cloak. Little did they know that a storm was brewing! They fell asleep on their journey and woke up on a completely different island. But not just any island- it was a garbage island! To make matters worse, their boat was completely broken.

What should Esiw and Kitty do now? Should they fix the broken boat or stay on garbage island forever?

Esiw and Kitty decided to rebuild the boat with your help! After searching through the island they find some wooden planks, metal sheets, clear plastic plates, styrofoam and some paper.

First, they needed to fix the floor of the boat. The floor needs to be rigid and waterproof. Which material do you think they should use: wood or styrofoam?

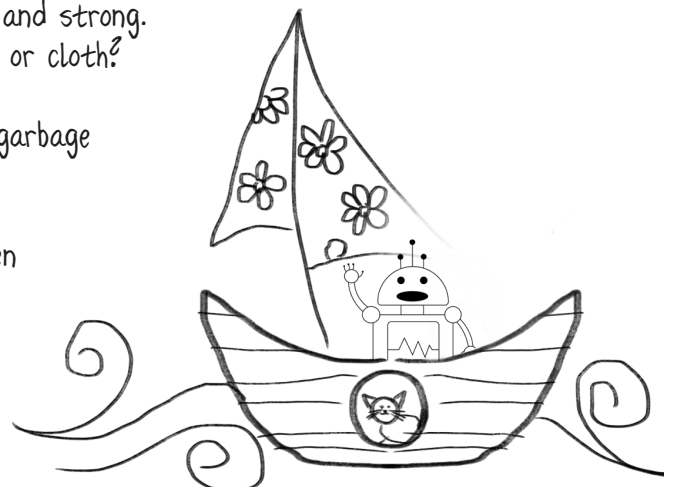
Yes, they should use wood! After the floor was fixed, Esiw decided to put a window in the boat so Kitty can look outside.

Which material has the characteristic of being transparent: a plastic plate or a metal sheet?

Yes, the plastic plate is perfect! The last thing they needed is to make a sail for the boat. The sail needs to be flexible and strong. What material should Esiw use to make the sail: paper or cloth?

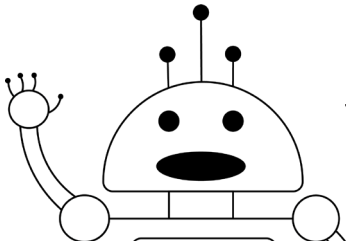
Esiw decided to use a cloth but could not find any on garbage island so Esiw used their old cloak.

When the boat was complete, Esiw thought it looked even better than before. Kitty loved it too and hopped on board right away! As they were saying goodbye to garbage island, Esiw realized that old things can be useful and sometimes even better than new ones.



The Life of a Deer

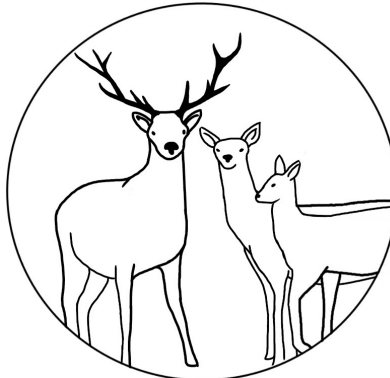
All living things need food, water, and shelter to stay healthy. Animals such as deer also need to avoid predators like wolves that try to hunt them.



I love sorting! Can you help me sort the items below? What does a deer need to survive and what would it want to avoid? Colour the good items and cross out the bad ones!



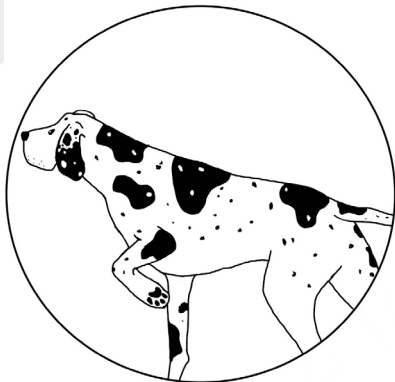
Bush



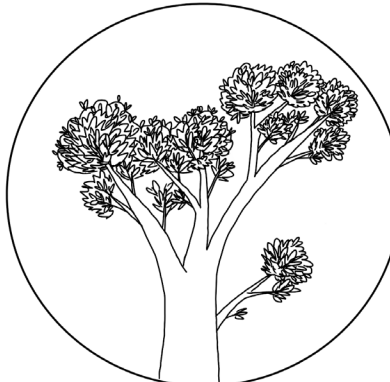
Herd of Deer



Road



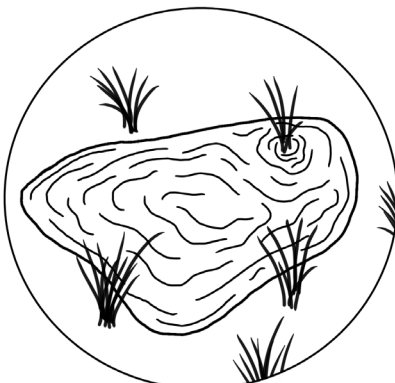
Hunting Dog



Tree



Fire



Pond

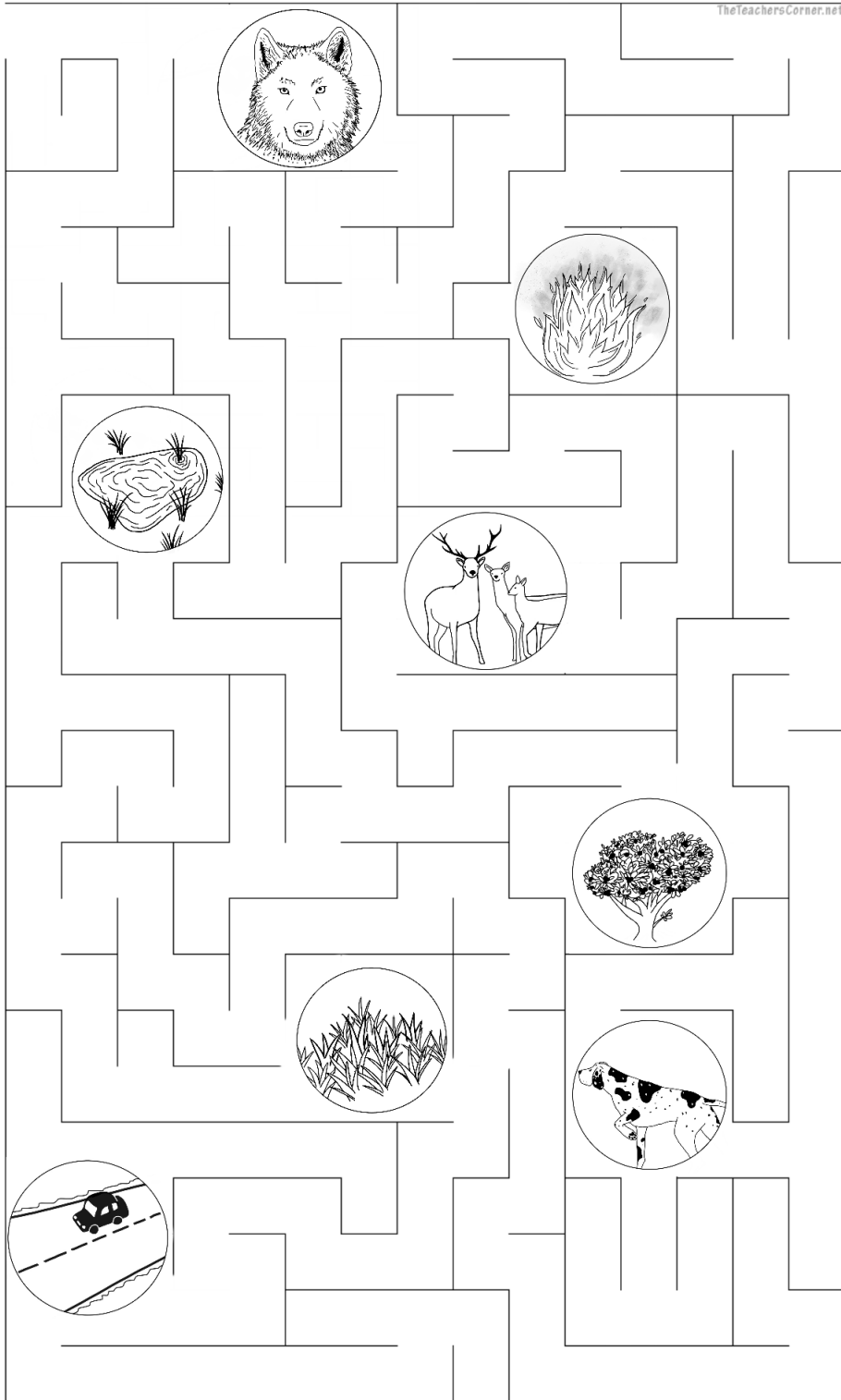


Wolf



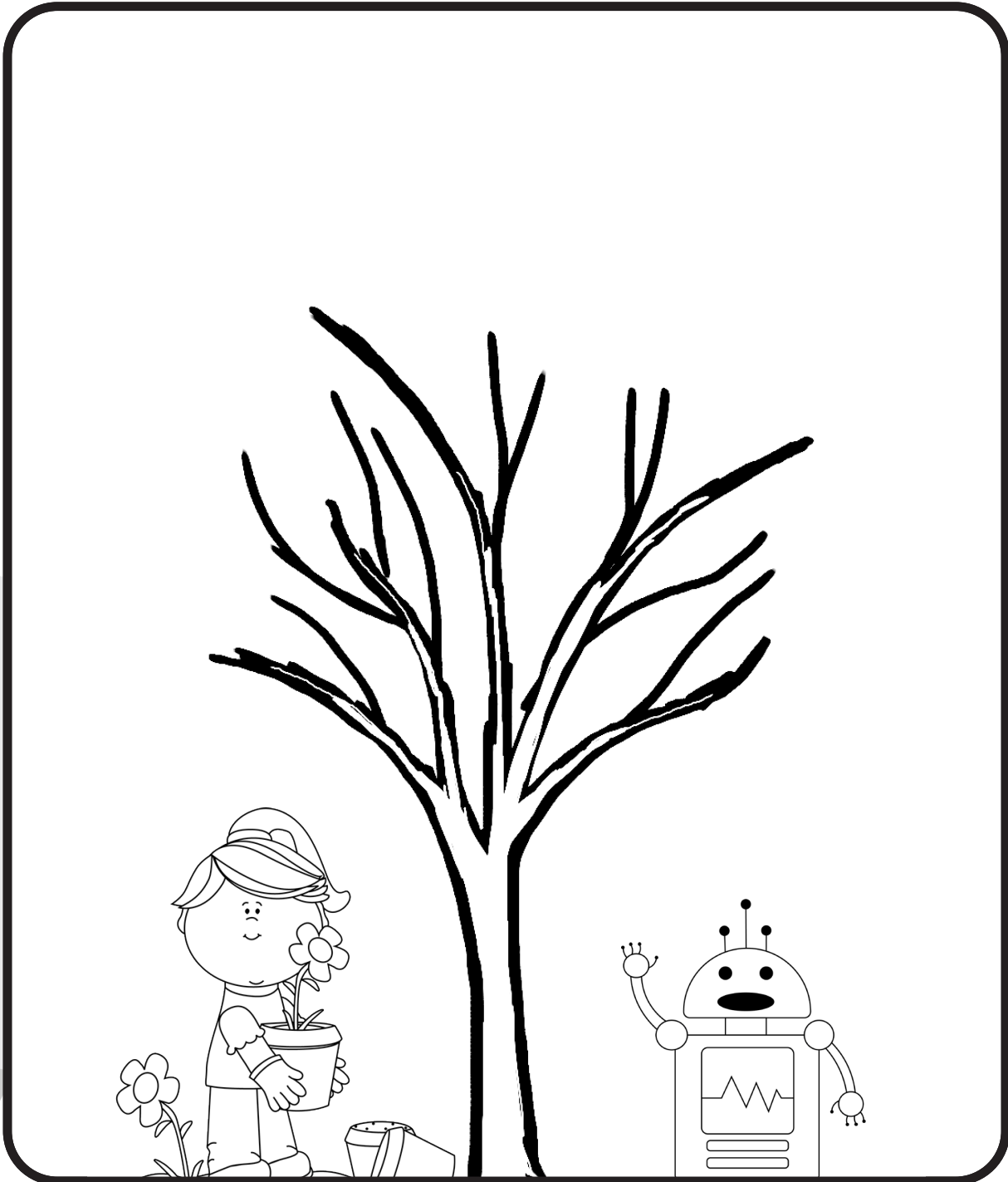
Grass

Can you help Danny the Deer get through the maze?
Collect the good items and avoid the bad ones!

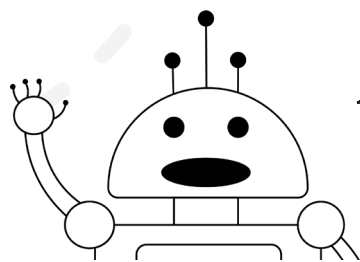


_____’s Tree

Now that you know what trees look like in different seasons, what would you want your very own tree to look like? In the space below, draw what you would want on your tree and remember to colour it in too. Keep in mind that all kinds of things grow on different kinds of trees like apples, oranges, flowers and more!



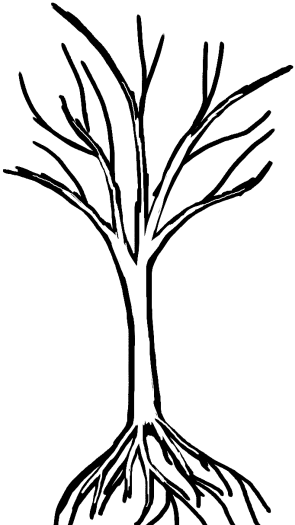
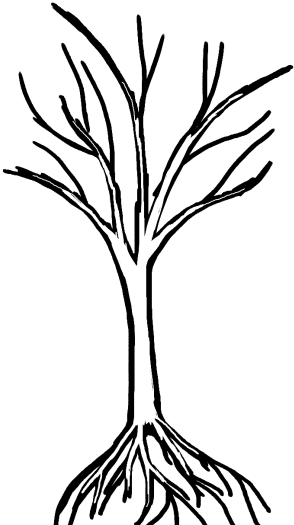
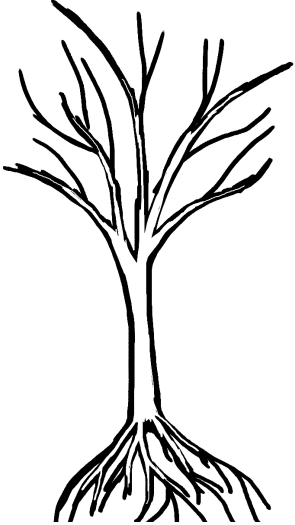
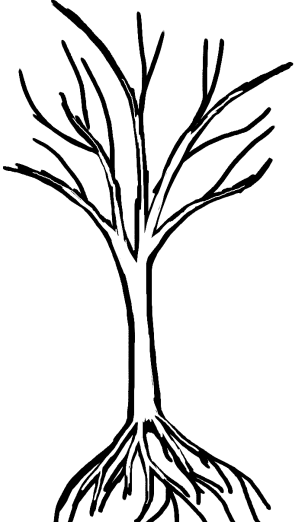
Trees and Seasons

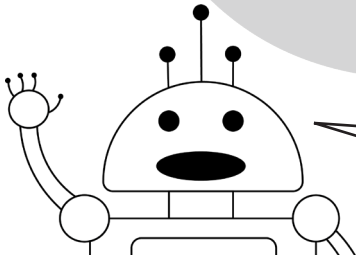


I want to learn more about the four different seasons. Can you help me collect data?

Help Esiw out by colouring each tree and background below based on its season.

Helpful Hints: What would the tree's leaves and flowers look like in different seasons? Are the animals around the tree different? How is the weather in the area different?

<p>Winter</p> 	<p>Spring</p> 
<p>Summer</p> 	<p>Fall</p> 



Colours & Senses Scavenger Hunt

I want to collect data and learn about how humans use their senses! Can you help me?

Use your senses to find a thing in your home that fits each sentence below to collect data for Esiw. For each thing you find, put a checkmark in the right box and draw it under the sentence! You can ask a family member or friend to help.

Something red you can see with your eyes:

Something orange you can smell with your nose:

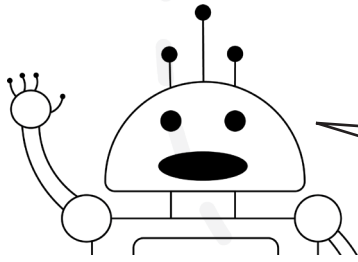
Something yellow you can hear with your ears:

Something green you can touch with your hands:

Something purple you can hear with your ears:

Something white that is safe to taste with your tongue:

This page was created by Katy.



Scavenger Hunt Challenge

I've learned a lot about human senses and I'm ready for a challenge. Are you?

Let's go on a scavenger hunt outside! Bring a family member or friend with you, and take a walk around your community to find things that fit each sentence below. How many of these things can you find?

- Something black that you can touch:

- Something brown that makes a loud noise:

- Something gray that you can smell:

- Something that is a dark colour and big:

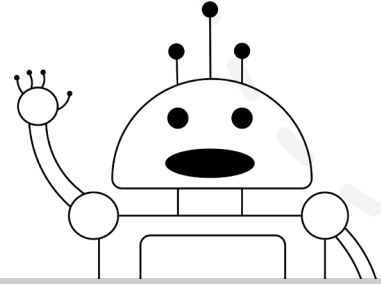
- Something that is a light colour and small:

- Something that is a mix of different colours:

- Something that is a primary colour (red, blue or yellow):

Draw a Selfie

I want to collect data about what humans looks like; can you help me?



A selfie is a picture you take of yourself. Can you draw a selfie to send to Esiw after answering the questions below? Think about the parts of your body you use to see, hear, smell, taste & touch. You can ask a member or friend to help you!

What colour are your eyes? _____

What colour is your hair? _____

What colours are you wearing? _____

How do you see? _____

How do you hear? _____

How do you smell? _____

How do you taste? _____

How do you touch? _____

Now draw your selfie to send to Esiw!



A Silly Story with the 5 Senses (Part 1)

Write down words that match the description below, then use those words to fill the right blanks on the next page (Part 2) to make a silly story! You can ask a family member or friend to help you out.

A person's name: _____

Another person's name: _____

Something that tastes sweet: _____

Something that feels sticky: _____

Something that feels bumpy: _____

Something that feels soft: _____

A food with a strong smell: _____

Something that smells good: _____

Something that makes a loud noise: _____

An object you can see right now: _____

Something that tastes sour: _____

A sound an animal makes: _____

Something with stripes: _____

A Silly Story with the 5 Senses (Part 2)

_____ loves baking with their friend _____. One day, they
Name 1 Name 2

decided to make _____ flavoured cookies! First, they got out the
something that tastes sweet

_____ and the _____ and mixed them together.
something that feels sticky something that feels bumpy

Once the mixture looked like _____, they knew it was time to
something that feels soft

add in some _____. When _____ smelled the cookie
food with a strong smell Name 2

dough, they said “Wow! That smells exactly like _____!” When
something that smells good

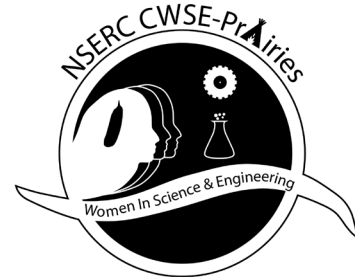
the cookies were baking in the oven, it sounded like _____
something that makes a loud noise

and looked like _____. After they were done, _____
an object you can see right now Name 1

ate a cookie, which tasted like _____. “_____!”
something that tastes sour sound an animal makes

They said. “These are weird cookies... but at least they aren’t _____!”
something with stripes

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