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Writer's Notebook: Heart Mapping

Information for students

Over the next five weeks, we will be going on a writing journey. Get ready to discover the writer lurking inside of you! It is there, don't worry. Even if you've never thought of yourself as a writer, that is about to change.

Published poet, writer, and teacher Georgia Heard writes about what she knows. This is a great place to start your writer's journey. Enjoy her "heart map" technique and try exploring one of your ideas in your notebook.

Remember, skillful writers are also skillful readers. Writers look to reading to inspire and guide them. Make sure you are reading for at least 30 minutes each day. The more you read, the better you get!

Instructions

Your Writer's Notebook:

- Start off this week by finding a notebook with at least 10-15 available pages for writing. This could be an old school book, papers in a binder, or pages stapled together. This will be your own safe space to express yourself without worry. No one will be correcting your work or judging your ideas. You are a writer and writers write to express themselves. If you want, you might like to decorate the cover of your notebook with pictures, stickers, or other crafty ideas. On the first page of your notebook, label the top: Writing Ideas. Use this page to collect writing ideas as they pop into your head over the course of the following weeks.

Heart Mapping:

- Begin by drawing a large heart on a blank page. Divide your heart into 8-10 sections using straight, zigzag, or wavy lines. Think for a minute about the people, places, and things that you care about. Starting at the centre of your heart, write the most important people, places, or things and work your way out, adding ideas. Try not to just write one word (pet, park, ice cream). Instead use specific vocabulary to remind you of the idea (e.g. new puppy, falling off swing, making ice cream with your uncle). If you are having a hard time thinking of ideas, use the questions in Appendix 1 to help you. If you'd like, add colour and images to your heart map. See a sample heart map in Appendix 2.
- Place your finger on each section of your heart map and tell yourself, or someone in your home, about the story that can be found in that place in your heart. For example, in a section that says "Grandpa Pizza" someone might say "Grandpa used to pick me up from daycare and we would go play chess and eat pizza at his house."
- Slip your heart map into your writer's notebook so that you can turn to it for writing ideas any time. You might also think of specific ideas for stories that you'd like to keep track of on the first page of your notebook.
- Select one writing idea from your heart map and write about it in your notebook. Don't worry about how much you are writing or making it perfect. This is a quick draft that you might return



to another time. The most important part is getting your ideas on paper. See an example in Appendix 3.

English Language Arts

Materials required

- A notebook, or lined paper
- A pen or pencil
- Markers or coloured pencils (optional)

Information for parents

Children should:

- take 20-30 minutes each day to write in their writer's notebook
- after their initial writing has been completed, they can select other ideas from their map to write about
- extend the activity by completing additional heart maps (good and bad; happy and sad; secret and open) and include different things inside each heart

Parents could:

- read instructions to your child if necessary
- ensure your child understands the task
- encourage your child to read and write daily



Appendix 1 – Heart Mapping Questions

- Which people have been important to you and why?
- What are some experiences or events that you will never forget?
- What happy or sad memories do you have?
- What secrets do you keep in your heart? What things or objects are important to you -- for example, a tree in your backyard or a stuffed animal, etc.?



Appendix 2 – Heart Map





Appendix 3 – Quick Write

My palms were sweating, my feet sore in the hard black shoes my mom had gotten for my big day. I was walking down the aisle, through the crowded audience. I had been practicing for this piano recital for months. I knew my piece “Penguins” by heart, inside and out. I could play it with my eyes closed ... trust me, I even tried it once! But now, my heart was beating hard in my chest. I swallowed, my dry throat scratchy and sore. That walk to the piano felt endless, like walking across a football field in quicksand. Finally, I approached the piano bench and...



Le jeu de l'acrostiche!

Information for students

Un **acrostiche** est un poème composé de telle façon que l'on peut lire un mot en regroupant verticalement les lettres initiales de chaque vers.

Produis un premier **acrostiche** à l'aide des lettres de ton prénom. Pour chaque lettre, tu devras y associer un adjectif qui te décrit. Dans l'exemple, on observe un acrostiche créé à partir du prénom « Paul. »

Patient

Actif

Unique

Loyal

Produis un deuxième acrostiche à l'aide du mot « arc-en-ciel. » Pour chaque lettre, trouve un mot ou une expression en lien avec le thème.

A _____

R _____

C _____

- _____

E _____

N _____

- _____

C _____

I _____

E _____

L _____

Clique ici pour voir des exemples d'acrostiches : <https://youtu.be/0CX7yQuwh0I>

Pour aller plus loin :

Crée des acrostiches avec les noms des personnes avec qui tu habites et affiches-les sur ton frigo ou à un autre endroit dans la maison.



Materials required

- Une feuille et un crayon.
- Dictionnaire français et/ou français/anglais.

Information for parents

- Review the instructions with your child, if necessary.
- Discuss the questions together.
- Help your child think of words to complete their acrostic.



Straight-Line Drawings¹

Information for students

- This activity combines drawing with your knowledge of Cartesian planes and integers.
- Using the coordinates and the graph paper provided below (or your own graph paper), can you identify the image?

Materials required

- Pencil, eraser, ruler (may require graph paper or a loose-leaf sheet)
- Appendix I – Straight-Line Drawings

Information for parents

About the activity

Children could need help to:

- remember how coordinates are expressed (i.e. x is first, y is second)
- remember integers
- identify a point on a graph correctly

Parents may/should:

- assist their child in printing/preparing their Cartesian plane
- encourage their child to persevere
- allow them to struggle, but provide them with information that will move them along before they get discouraged

¹ Activity based on: Raimonda Aima, *Drawn Dog Straight Line - Line Drawing White On Black Dog, HD Png Download*, n.d., PNG, Pngitem.com, https://www.pngitem.com/middle/whwbob_drawn-dog-straight-line-line-drawing-white-on/



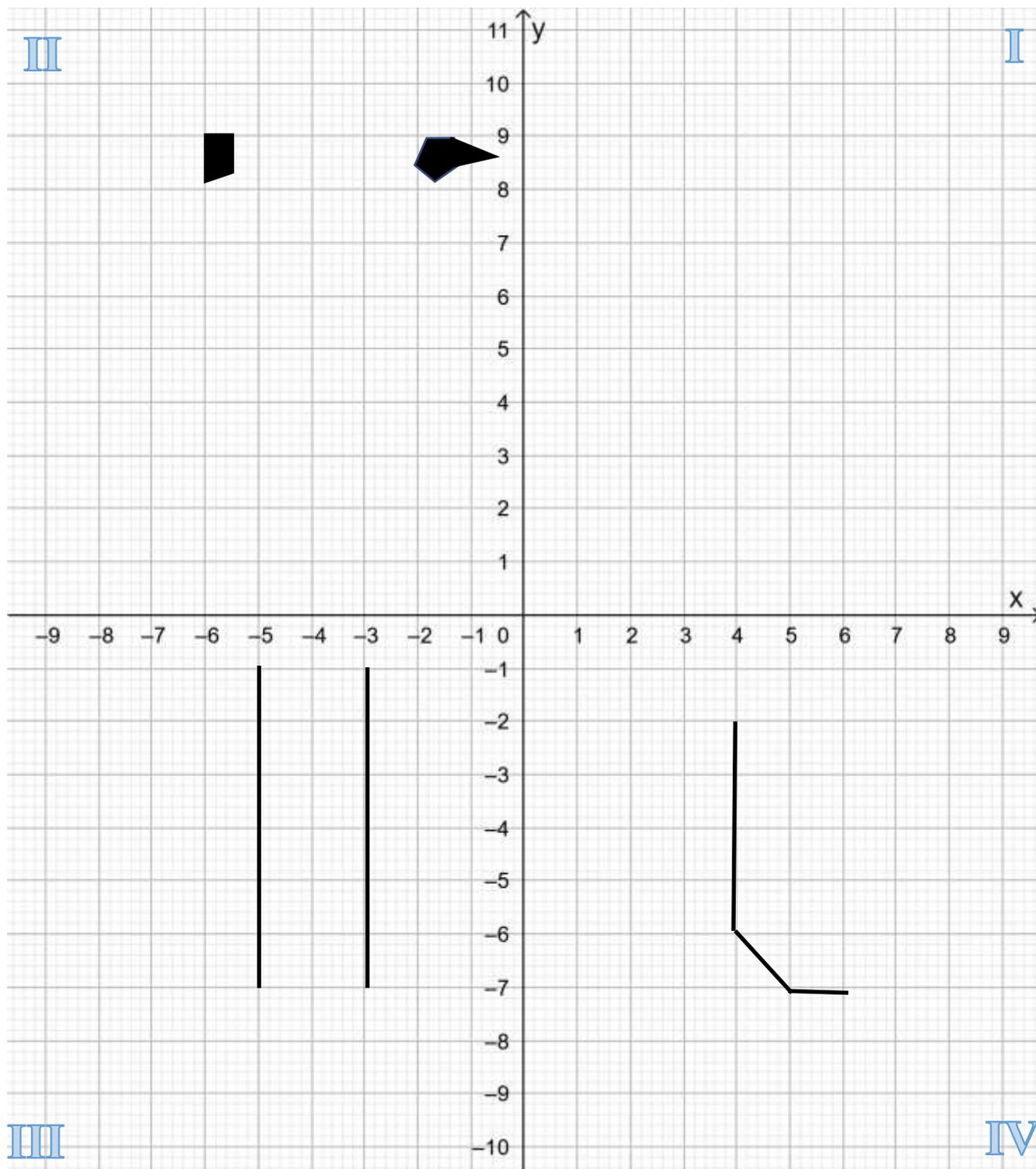
Appendix I – Straight-Line Drawing

Information for students

- If you cannot print the worksheet in Appendix II, you will have to prepare one with graph paper. Do the following:
 - Get a regular 8 1/2 by 11 sheet of graph paper (a loose-leaf sheet can be used if you have no graph paper).
 - Use your ruler to draw the y -axis near the horizontal centre of the paper.
 - Now, use your ruler to draw the x -axis near the vertical centre of the paper.
 - Label your axes as shown in Appendix II, and identify the coordinates on these axes.
 - (Note: If you are using a regular loose-leaf sheet, the more precise your coordinates, the nicer the image.)
 - You are now ready to begin the activity.
- An arrow between pairs of coordinates indicates that you must join them together by drawing a straight line between them. You may use a ruler to draw straight lines.
- Locate the given coordinates by plotting them on the graph paper.
- There are coordinates for each quadrant so you can stop between each section, if you want.
 - Quadrant 1: $(5, 0) \rightarrow (4, 3) \rightarrow (3.5, 5.5)$
 $(0, 10) \rightarrow (1, 10) \rightarrow (1, 6) \rightarrow (2, 5) \rightarrow (3.5, 5.5) \rightarrow (5, 6) \rightarrow (4, 9) \rightarrow (1, 10)$
 - Quadrant 2: $(0, 10) \rightarrow (-2, 10) \rightarrow (-3, 9) \rightarrow (-6, 9) \rightarrow (-6, 8) \rightarrow (-5, 6) \rightarrow (-3, 5) \rightarrow (-4, 2)$
 $\rightarrow (-6, 0)$
 - Quadrant 3: $(-6, 0) \rightarrow (-6, -3) \rightarrow (-5, -5) \rightarrow (-7, -6) \rightarrow (-7, -7) \rightarrow (-5, -7) \rightarrow (-6, -8)$
 $\rightarrow (-5, -9) \rightarrow (-4, -9) \rightarrow (-3, -8) \rightarrow (-3, -7) \rightarrow (-1, -4) \rightarrow (0, -4)$
 - Quadrant 4: $(0, -4) \rightarrow (1, -4) \rightarrow (2, -7) \rightarrow (3, -8) \rightarrow (3, -9) \rightarrow (4, -9) \rightarrow (6, -8) \rightarrow (6, -7)$
 $\rightarrow (7, -7) \rightarrow (7, -6) \rightarrow (6, -5) \rightarrow (5, -5) \rightarrow (6, -3) \rightarrow (6, -1) \rightarrow (5, 0)$
- What animal did you get?
- Using a blank piece of graph paper, draw another shape. (another animal, a symbol). Now write down the coordinates and send them to a friend, a sibling or a parent, and challenge them to copy your drawing.



Appendix II – Straight-Line Drawing





Ecological Pyramids

Information for students

Click on the following links to watch videos that will allow you to review these topics:

- [Ecological Pyramids](#)
- [Food Webs and Energy Pyramids: Bedrocks of Biodiversity](#)
- [Autotrophs versus Heterotrophs](#)

Complete the worksheet in Appendix A to check your understanding.

Play “Feed the Dingo: An Ecosystem Game” using the link below:

- [Feed the Dingo: An Ecosystem Game](#)

Materials required

- Appendix A: Ecological Pyramid Worksheet
- Device with Internet access.

Information for parents

- Read the instructions with your child, if necessary.
- Discuss the questions in Appendix A together.
- Discuss the best strategies to complete Appendix A using the resources provided.



Appendix A: Ecological Pyramid Worksheet

Instructions:

After you have watched the videos listed under Information for Students, answer the questions below:

1. What is an ecological pyramid? What does it show?

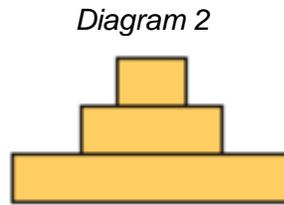
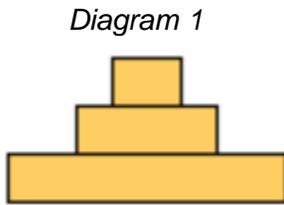
2. What is a trophic level?

3. What is a “producer”? How is it different from a “consumer”?

4. In a Pyramid of Numbers, if the second level (Primary Consumers) is double the size of the third level (Secondary Consumers), what does this say about the number of organisms in the third trophic level compared to the second?



5. A Pyramid of Numbers can often be an inverted pyramid. However, a Pyramid of Biomass can never look like this. Why?



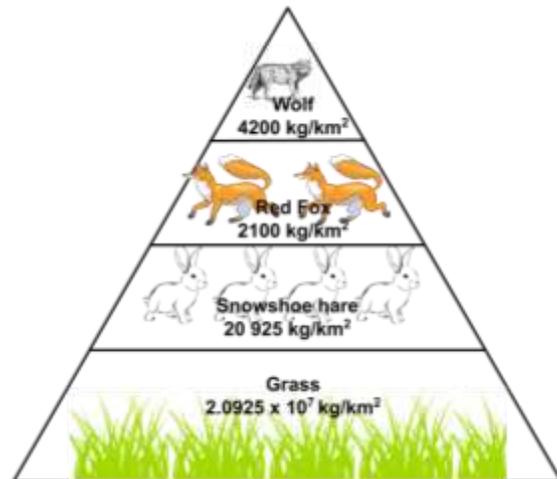
6. In an Ecological Pyramid, does the energy flow from bottom to top, or from top to bottom?

It flows from _____ to _____.

7. Identify which type of pyramid is shown below.

This is a Pyramid² of _____.

This is a Pyramid of _____.



²LeoNomis, *Pyramid of Numbers*, October 6, 2007, Wikipedia. Accessed May 5, 2020, https://en.wikipedia.org/wiki/File:Pyramid_of_numbers.png



8. Check the box corresponding to the trophic level containing the most energy.

Primary Consumer

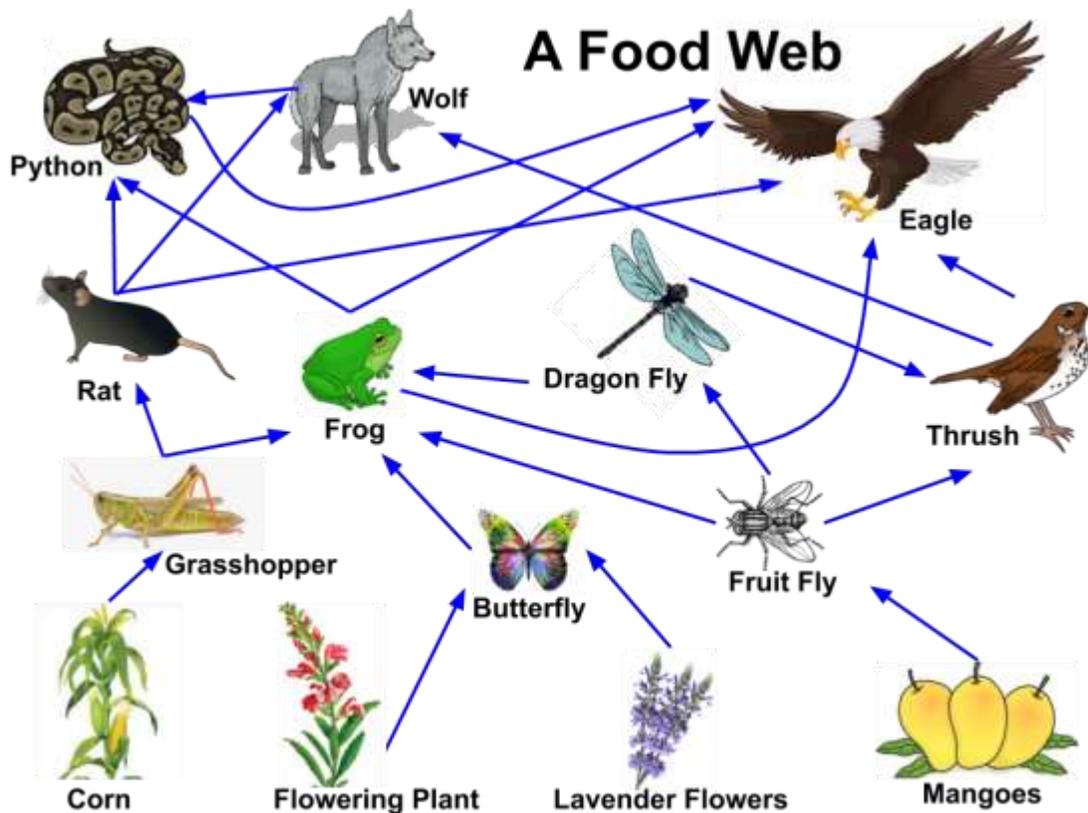
Producer

Secondary Consumer Tertiary Consumer

9. How much energy is normally lost through heat as we move from one trophic level to the next?

%

10. In the food web below, there are several food chains that include frogs. In the spaces provided, identify all of the organisms in the order in which they occur in four possible food chains that include the frog.





Chain 1:

Chain 2:

Chain 3:

Chain 4:

11. How is an “autotroph” different from a “heterotroph”?

12. In the Pyramid below³, what percentage of organisms are lost as we move from one trophic level to the next?

%



³ LeoNomis, *Pyramid of Numbers*, October 6, 2007, Wikipedia. Accessed May 5, 2020, https://en.wikipedia.org/wiki/File:Pyramid_of_numbers.png



Appendix B: Solutions

1. What is an ecological pyramid? What does it show?

Ecological pyramids are triangular or pyramid-shaped diagrams used to show relationships between organisms in an ecosystem. Each bar in the pyramid represents a trophic level and the order of the bars represents the flow of energy. The bottom level of the pyramid shows the primary producers, with the next level above showing the primary consumers, then secondary consumers, and the top of the pyramid showing tertiary consumers. There are two types of pyramids: pyramids of numbers and pyramids of biomass.

2. What is a trophic level?

A trophic level of an organism is the step it is on the pyramid or the position it is in a food chain. For example, if an organism is in the second step of the pyramid, this would be in the second trophic level.

3. What is a “producer”? How is it different from a “consumer”?

A producer is an organism that makes its own food. A plant is an example of a producer. A producer is also known as an autotroph. A consumer is an organism that needs to feed on other organisms. For example, a grasshopper is a consumer because it feeds off of a plant. A consumer is also known as a heterotroph. Consumers do not produce their own food like producers do.

4. In a Pyramid of Numbers, if the second bar (Primary Consumers) is double the size of the third (Secondary Consumers), what does this say about the number of organisms in the third trophic level compared to the second?

If the second bar of a pyramid of numbers is double the size of the third bar, it means that there are two times as many organisms in the second bar that can feed the secondary consumers in the third bar. In other words, only half the number of secondary consumers (third bar) are fed by the amount of primary consumers (second bar) in that pyramid.

5. A Pyramid of Numbers can often be an inverted pyramid. However, a Pyramid of Biomass can never look like this. Why?



A pyramid of numbers shows the number of organisms at that step in the food chain. There may be fewer organisms at a lower trophic level than at a higher one. For example, a primary producer, like one oak tree, can feed a large number of primary consumers like caterpillars, so there would only be one oak tree at the bottom level of the pyramid, using a short bar, and a large number of caterpillars in the level above, so the bar would be a lot longer. A pyramid of biomass doesn't show the number of



organisms, but shows the total mass in that trophic level, which is measured in grams per square unit of area. The lower trophic levels produce a larger biomass.

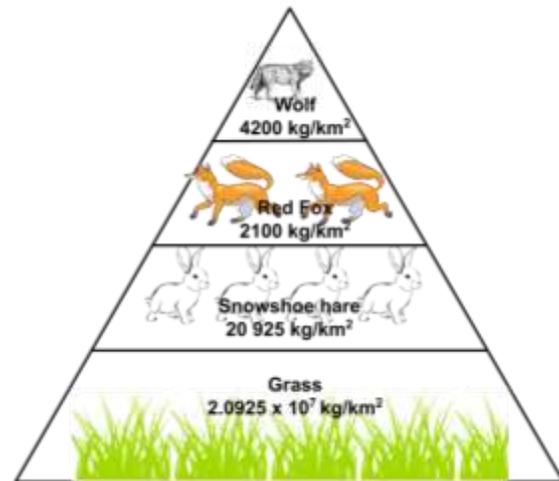
6. In an Ecological Pyramid, does the energy flow from bottom to top or top to bottom?

It flows from bottom to top.

7. Identify which type of pyramid is shown below.

This is a Pyramid⁴ of numbers.

This is a Pyramid of biomass.



8. Check the box corresponding to the trophic level containing the most energy.

Primary Consumer

Producer

Secondary Consumer Tertiary Consumer

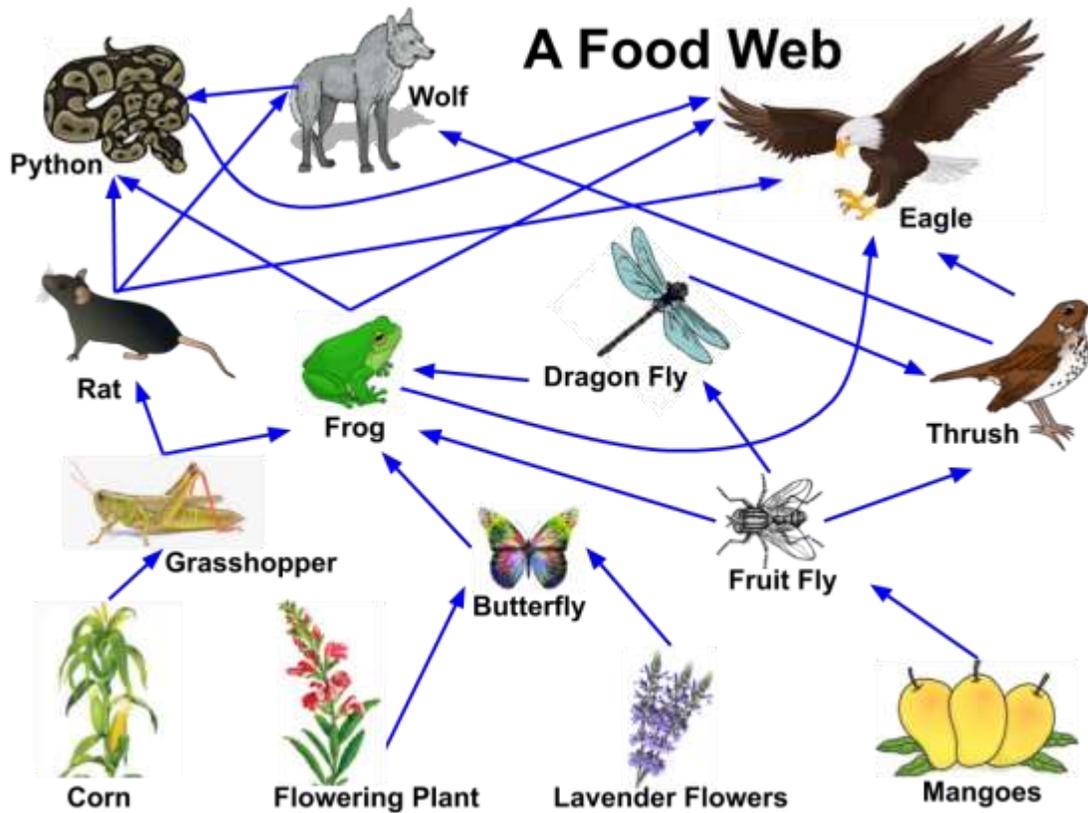
9. How much energy is normally lost through heat as we move from one trophic level to the next?

⁴LeoNomis, *Pyramid of Numbers*, October 6, 2007, Wikipedia accessed May 5, 2020 https://en.wikipedia.org/wiki/File:Pyramid_of_numbers.png



Science and Technology

10. In the food web below, there are several food chains that include frogs. In the spaces provided, identify all of the organisms in the order in which they occur in four possible food chains that include the frog.



Chain 1:

Mangoes, fruit fly, frog, eagle

Chain 2:

Lavender flowers, butterfly, frog, python

Chain 3:

Corn, grasshopper, frog, eagle

Chain 4:

Flowering plant, butterfly, frog, python

11. How is an “autotroph” different from a “heterotroph”?

An autotroph is different from a heterotroph because it is a producer that makes its own food. An autotroph gets energy directly from the sun and uses a process called photosynthesis to take energy from the sun to make sugar (or glucose). A heterotroph is a consumer and does not produce its own food. There are four types of heterotrophs: herbivores (eat plants only), carnivores (eat animals only), omnivores (eat both plants and animals) and saprobic (absorb nutrition from environment).

12. In the Pyramid below⁵, what percentage of organisms are lost as we move from one trophic level to the next?



⁵ LeoNomis, *Pyramid of Numbers*, October 6, 2007, Wikipedia accessed May 5, 2020 https://en.wikipedia.org/wiki/File:Pyramid_of_numbers.png



The Importance of Being Hydrated

Information for students

Activity 1: The importance of hydration

- Watch the following video to learn about the importance of being hydrated:
 - Video: [Benefits of Water](#)
- What did you learn from the video? Why is it important to be hydrated? Do you think you drink enough water every day? If not, what can you do to make sure you drink more?
- Discuss what you learned about hydration with a member of your family.

Activity 2: Fun fitness challenge

- Try the exercises in the following video:
 - Video: [7 Minute Family and Kids Workout](#)
- If necessary, adapt the movements to your abilities.

Materials required

- None

Information for parents

About the activity

Children could:

- learn about the importance of being hydrated
- try the suggested workout

Parents should:

- ask their children questions about what they have learned about hydration
- support their children by doing the workout with them or help them be more autonomous during the activity



Survival

Information for students

Each individual's knowledge, values, preferences and personal experiences affect the decisions they make. Though we may have conflicting opinions and values, these differences can be enriching.

You will participate in this activity with a small group of classmates or a few members of your family (3-4 people). You will learn about each other's point of view while making a collaborative decision.

- Pretend that you're part of a family of five. You're in a boat with your family, and the boat is sinking. You see an island nearby and know that you can all swim there, but you can't swim and hold more than one item. You can **each** carry **one item** from the boat to bring with you to the island.
- Each member of your discussion group must think about which five items they would personally like brought to the island. Select from among the 20 items listed in the appendix.
- Explain your reasons for choosing the five items you selected. Listen to the reasons the other members of the group provide for their five choices. Compare your choices. Are some choices the same? Why are some choices different? Are you able to view each other's choices as valid, in light of differences in perspective, life experiences, values, etc.?
- Have a healthy debate about your differences in choices and work together to come to a consensus on the five items to bring to the island. Consensus means that there is general agreement among all members of the discussion group. Remember that a healthy debate allows each person the chance to talk and express their ideas. You need to come to a consensus, so you will have to be active listeners and open to different ways of thinking in order to make a group decision.

Do not read the *Island Scenarios* on the next page until you have made your decision.

- Once you have reached a consensus, roll a die. The number you roll will correspond to a scenario on the next page, explaining the conditions of the island (see *Island Scenarios*). With the five items you have selected, discuss whether your family of five can survive on this island for seven days before help arrives. Are there some different items you wish you had selected instead, based on the scenario you rolled? What are those items and how would they have helped?
- Take turns discussing which of the six island scenarios you would prefer to encounter. Which is your least favourite?

Materials required

- A single die. If you do not have a die, you can write the numbers 1 to 6 on scrap pieces of paper, place them in a hat and select one.



Island Scenarios

<p>1. Food is aplenty, since the island is full of low growing root vegetables, small berry plants and wild animals. However, there is not a single tree on the island.</p>	<p>2. The island is hot and dry. There are palm trees with coconuts and some prickly pear cacti. The only creatures on the island are highly venomous scorpions and crickets, which scorpions love to eat.</p>
<p>3. The island is warm and comfortable. The temperature remains between 18 and 25 degrees Celsius. Despite the lovely temperature, strangely, there is no food-producing vegetation. The island does have an abundance of flying insects that sting. These insects don't like fire and keep a distance of 2 metres from flames.</p>	<p>4. The island experiences heavy rain storms every two days that last for 10 of the 12 hours of daylight, leaving everything soaking wet. On days that it doesn't rain, it's always cloudy, so the island is constantly damp and cold. Yet, there are some fruit trees that thrive in wet soil.</p>
<p>5. There are beautiful fruit trees on the island, but the island gets hit with hurricane winds twice every week, causing extensive damage. During each storm, 75% of the fruit on the trees blows off and rolls into the ocean. You arrive the day after the most recent storm and do not yet know about the storm patterns. Branches are strewn all over the beachfront.</p>	<p>6. The island temperature is always a cool 10 degrees Celsius during the day and drops between 0 and -5 degrees Celsius every night. Typically, seawater freezes around -2 degrees Celsius, but since the daytime temperature is always above freezing, the ocean water around this beach never fully freezes and there are plenty of fish in the sea.</p>

Information for parents

About the activity

Connections to the ERC program include:

- organize their ideas and express them with respect and conviction
- grow and develop in a society in which different values and beliefs coexist

Parents should:

- Read the instructions with their child, if necessary.
- Help their child gather a small group of family members (3-4) to participate in the activity. If there are not have enough family members in the household who can play, this can be done with relatives over the phone or through a video conferencing platform.
- Participate in the activity with their child, if possible.



Appendix – Survival

Information for students

Select 5 items from among these 20.

<p>Hammer</p> 	<p>6 metres of rope</p> 	<p>Flashlight and batteries</p> 	<p>Handkerchief</p> 
<p>Book</p> 	<p>Raincoat</p> 	<p>Box of 40 granola bars</p> 	<p>Orange tarp</p> 
<p>Compass</p> 	<p>Matches</p> 	<p>Toilet paper</p> 	<p>First aid kit</p> 
<p>Duct tape</p> 	<p>Hatchet</p> 	<p>Compact mirror</p> 	<p>5 water purification tablets</p> 
<p>Blanket</p> 	<p>Metal pot</p> 	<p>Pocket knife</p> 	<p>Aluminum foil roll</p> 

Images : www.pixabay.com