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| Audience: Kindergarten | Duration: 30-35 min | Department: Education |
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Program Description:

As the Minnesota Zoo reimagines education programming, it is critical to understand how to create effective, relevant, and engaging content for our community. Virtual zoo programming offers an opportunity to fulfill our mission with audiences ranging from traditional zoo-goers to traditionally underserved communities near and far.

The Minnesota Zoo received a grant through Woodland Park Zoo to work with an evaluator and several schools throughout Minnesota to identify culturally responsive best practices for delivering virtual programming to guide future program development and implementation. This project will explore and enhance the efficacy of live virtual engagement with animals in fostering empathy for wildlife, while ensuring our future work is inclusive and accessible.

Intended Outcomes

| INSPIRE/FEEL | TEACH/LEARN | ACT/DO |
|---|---|---|
| <i>Affective (emotions & attitudes)</i> | <i>Cognitive (facts & concepts)</i> | <i>Behavioral (actions & behavior changes)</i> |
| As a result of this program, my audience will feel... | As a result of this program, my audience will learn... | As a result of this program, my audience will act to... |
| Feel emotionally connected to animals and nature. | Understand ecological principles that reveal the vital connections between humans, animals, and nature. | Make daily personal choices that benefit wildlife and habitats. |

Learning Objectives

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- Learners will be able to identify and sort objects into living and non-living groups.
- Learners will compare similarities and differences in living things.
- Learners will identify external parts of animals and plants.
- Learners will make observations and describe what animals and plants need to survive.

Social/Emotional

- Social Awareness
- Relationship Skills

MN Graduation Standards Supported

2009 MN State Science Standards

- K.4.1.1.1 Observe and compare plants and animals.
- K.4.1.1.2 Identify the external parts of a variety of plants and animals including humans.
- K.4.1.1.3 Differentiate between living and nonliving things.

NGSS Standard

- K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

PROGRAM SERIES OVERVIEW

| | Program A | Program B: Trail Tour |
|-------------------------|---|--|
| Theme | Is it Alive? | Tropics Trail, Ocean |
| Animal Encounter | What does a living thing need to live and grow? | Focus on how animals on these trails find their essential needs to live. (Ex: how does the animal move, eat, reproduce, grow and change) |

PROGRAM 1: IS IT ALIVE?

| Activities/Abbreviated Procedure | Location | Outcomes |
|---|-----------------|--|
| 1. Introduction of staff, overview of logistics and Ice Breaker Activity (5 min) | Earth Classroom | Students will be familiar with the schedule and what to expect for the next couple of weeks. |
| 2. Animal demo – introduction to living and nonliving things (15 min) | Earth Classroom | Student will practice making observations. Students will use their observations to support their reasoning for whether the animal is a living object or not. Student will identify what animal needs to live and grow. |
| 3. Review living and non-living objects. (10 min) | Earth Classroom | Student will identify characteristics of living and non-living objects. |

| | | |
|--|-----------------|---|
| 4. Conclusion & sneak peek for trail tour (5 min) | Earth Classroom | Students will distinguish the difference between living and non-living objects. |
|--|-----------------|---|

DETAILED OUTLINE:

Materials needed:

- 2 iPads & laptop
- White board and dry erase marker
- List and photos of students' favorite animals
- A picture of your favorite animal
- Large tiger plush toy
- Plant replica
- **Movement activity:** various living and non-living objects (toy animals or stuffed animals from Sky: sea star or coral biofact, rock, pinecone, plant, toy car, chair, book)

INTRODUCTION & ICE BREAKER (5 MIN):

- 1. Start on the laptop in Earth classroom. Connect both iPads but keep the microphone disconnected.**
2. Introduction to instructor and a brief description of the program.
 - Instructor introduces themselves.
 - Hi, welcome to the Minnesota Zoo! My name is _____. I use (insert pronouns) and I will be your naturalist today.
 - Go over the logistics of participating.
 - Each class will meet with a zoo staff twice, once this week and once next week.
 - We can't wait to hear from you today, and we want to give everyone a chance to share their ideas and questions so I am going to ask that if you have any questions, you can raise your hand and your teacher will call on you. Remind them to only ask appropriate questions and comments.
- 3. Ice Breaker Activity: Teachers have emailed their students' favorite animals and photos of these animals can be found in the "Students' Favorite Animal PowerPoint" found on basecamp.** Tell students that you really enjoyed learning about everyone's favorite animals. What do they like about their favorite animals? Invite students to share their answers by having their teachers call on them or type their answers in the chat. Show photos of these animals to give more context in case other students aren't familiar with every animal. Share with them your favorite animal along with a photo and what you like about that animal.
4. Ask students if there are any animals that make them uncomfortable. Give space for students to share their experiences and perspectives. What makes them uncomfortable? If they have had prior experiences with these animals, invite them to share it.
5. If there are shared favorite and uncomfortable animals, highlight these animals and point out that all animals are unique and special in their own way. There are millions of animals in the world including student's favorite animals. Some animals like

(highlight their favorite animals) live on land, some (highlight their favorite animals) prefer to live in water.

6. Are our favorite animals living? Give me a thumbs up if you think yes and a thumbs down if you think no. Yes, they are. Do they eat? Do they grow and change? Do they move?

ANIMAL DEMO (15 MIN):

1. **Tell students:** Today I have some friends I'd like to introduce you to, to help us learn more about living and nonliving things.

Introduce students to animal handler staff by spotlighting “Minnesota Zoo animal handler’s name”. Keep the audio connected on the laptop and disconnected on the iPad. Use the spotlighting feature on Zoom to highlight different cameras as needed. Instructor will be in charge of sharing their screen to share photos, vocabulary words (as needed), and writing down students’ ideas.

2. **(Animal handler staff takes over.)** Tell students that you have a couple friends you'd like to introduce them to and it's important that we make our friends feel welcomed, safe, and comfortable because each of us have been in a new unfamiliar before. Before you bring your friends out and invite students to greet animal ambassador (using a different language, gesture, etc.) Ask students what should we do to make sure *our new friends* feel safe, comfortable, and welcomed? Show them how you have set up the space to welcome our friends and what you have done to make the space safe and comfortable.
3. Introduce your plush toy tiger (any plushy) friend, (insert made up name) and your animal ambassador friend using its name and pronouns. Invite students to greet animal ambassador (using a different language, gesture, etc.)
4. Ask students if they know what (animal ambassador) likes to eat? What does (insert name of tiger friend) like to eat? Does the tiger need to be fed real food to live and grow? This should hopefully make the point that your tiger friend isn't alive.
 - Everything we see every day is either living (alive) or non-living. How do I know if something is living or alive? Can you help me figure it out?
 - What do you think all the living things have in common? What makes something alive? **Instructor will list their answers on a white board.**
 - Do not correct students if they answered incorrectly.
5. Tell students you want to invite them to look carefully and study (insert animal ambassador's name). You will have to introduce how to study something carefully. You can use your 5 senses, like listening with your ears, touching with your fingers, looking with your eyes, smelling with your nose, and tasting with your mouth. Today, we are going to use our eyes and ears to pay close attention.
6. As students observe the animal, ask them if the animal is a living or non-living. How did they know? Students might say, “He/she is moving, jumping, slithering, blinking, etc...”.
7. Tell students that a school bus also moves. Does that mean that the school bus is living? Why or why not? (*A school bus does move but it cannot grow, change, or reproduce.*)

8. Ask if students know what kind of animal he/she is. How did they know?
9. Tell students that because he/she is a living thing, you want to make sure that he/she is healthy and happy by getting everything that a living object needs to live and grow. Refer to student answers on the board and review their answers.
10. Ask students if they can help you think of additional things that the animal needs. Allow students to share their ideas on what you should provide the animal as a living thing.
11. Have teacher call on students to share their answers and respond by sharing the animal's story (both personal and natural history) and focus on:
 - *What kind of food he/she likes to eat?*
 - *What kind of home does he/she live in?*
 - *How does he/she move? Does he/she have a unique way of hiding or getting way from predators.*
 - *How does she/he reproduce?*
 - *How does she/he grow and change?*
12. Invites students to ask questions they have about animal ambassador.
13. Now that we know how to tell if something is living or non-living, we are going to practice sorting objects into living and nonliving groups.
14. Have students say goodbye to (insert animal ambassador's name).

Note: Remove the iPad cameras from the meeting by clicking on “manage participants” at the bottom of the navigation window. A list will appear on the right with a list of the participants in the meeting. Hover over the Animal Ambassador and Animal Handler Staff and click on the blue “More” button then click on “Remove”. Use your laptop for the second half of your program.

THEME OF THE WEEK (10 MIN):

1. Have students remind you how you can tell if something is alive?
 - All living things:
 - Need water
 - Need food (nutrients)
 - Need air/oxygen
 - Grow and change
 - Reproduce
 - Move
2. **Review Movement Activity:** We're going to do an activity that invites you to get up and move. You do not need to move away from your spot. You are welcome to stand if you would like to. Make sure that there is enough space around you, and you shouldn't be able to touch anyone or anything. I'm going to show you an object that represents a living or non-living thing. If you think it is living or was once a living thing, I want you to show me how that living thing moves. If you think it is a non-living thing, you don't have to do anything.
 - African Penguin – waddle
 - Car – no movement
 - Snake – put hands together and slither
 - Tree – Put hands up and out like branches and sway in the wind
 - Rock – no movement
 - Sea star – slowly moving around arms in wavelike motion

CONCLUSION (5 MIN):

Living things are found almost everywhere in the world. When you make close observations, you can tell if an object is a living thing if it grows and change, if it eats food or drink water (take in nutrients), and if it reproduces or have babies. Try to see if you can find one living thing and one nonliving thing today.

Sneak peek for your next activity: Next week, we will meet you at the same time to visit some animals that live here at the Minnesota Zoo.

PROGRAM B: TRAIL TOUR

Instructor Note: The goal of the trail tour is to connect classrooms to the rest of the Zoo. Classroom teachers have emailed their trail preference. This information can be found on your schedule. Refer to the virtual tour notes found in the virtual tour folder on basecamp for background information on each trail. Use this as an opportunity to review what students learned in Program A.

Recap of Program A:

- How do we know if something is living or nonliving?
- What do living things need to live and grow?
- How do living things grow and change?

| Oceans (Discovery Bay & Penguin) -include Penguins if time allows | Tropics Trail |
|---|--|
| <ul style="list-style-type: none"> • Highlight different ocean ecosystems. (Tide pool, coral reef, estuary) • Highlight a sea star, coral, shark, and turtle and focus on how these animals find their essential needs to live. (Ex: how does the animal move, eat, reproduce, grow and change) • Are penguins living? • Focus on how penguins find their essential needs to live. (Ex: how does they move, eat, reproduce, grow and change) • (Optional) Show photos of penguin eggs and chicks before heading to the exhibit. Then have students compare an adult and chick. | <ul style="list-style-type: none"> • Point out various plants like the fig tree, orchids, and bromeliads and highlight that plants are also living. How do plants grow and change? What do plants eat? • Highlight a mammal, reptile, bird and fish and focus on how these animals find their essential needs to live. (Ex: how does the animal move, eat, reproduce, grow and change) |