FIELD MUSEUM SCIENCE HUB AT HOME

Rapid Inventory: Home Edition

The ultimate scavanger hunt!

Summary:

Scientists from the Field Museum conduct Rapid Social and Biological Inventories to learn what different environments are like and which animals and plants live in them. This allows them to better understand an area in order to protect it. Practice your own rapid inventory in or around your home to explore how scientists do it!

Guiding Questions:

What animals and plants do you see?
How many can you find?
How many can you identify?
What does the information you collected tell you about this place?
What else do you think might be here that we don't see? How do you know?

Experience Goals:

- Learn what rapid inventories are, and how scientists plan and conduct them.
- Try your own rapid inventory around your house or in your yard.
- Discover the value of rapid inventories and how they help us protect ecosystems.

Supplies:

- Pencil or pen
- Rapid Inventory Chart (page 9-10) or sheet of paper
- A location to conduct your rapid inventory (house, yard, park)
- A timer, clock, or watch
- Rapid Inventory Info Sheet (page 6-8)

Steps:

1. **Learn about rapid inventories**
   a. Explore the Rapid Inventory Info Sheet on pages 6-8. A rapid inventory is a process where scientists go to a specific area, and spend a set amount of time documenting the animals and plants that live there. They also learn about the cultures of local people that live in that place.
   b. Think about what is necessary to do a rapid inventory. *How do scientists plan a rapid inventory? What information do they need?*

2. **Plan out your rapid inventory**
   a. As you plan your own rapid inventory, use the examples on pages 11-13 to help you.
   b. Decide whether you would like to do a rapid inventory that focuses on plants and animals, one that investigates culture, or both. If you plan to do an indoor rapid inventory, the animal version is recommended for early learners, and the cultural version for experienced learners.
   c. Choose your location! Pick a place where you will be able to move around and search for different things. *What are you looking for? Are you able to get outside?* If you can't get outside, you can practice a rapid inventory right inside your house!
   d. Scientists have to get permission from local people to do their rapid inventories. *Who owns the area where you will be doing yours?* (Hint: Get permission before conducting an inventory in a bedroom or a neighbor's yard!)
   e. Decide what to sample. *What do you want to know more about? Will you be looking for animals and plants? Cultural items? What type of environment is it?* Write down your ideas now. You will use them to make a chart later.
   f. If you are doing your rapid inventory inside, and

counting animals, you may need to use stuffed animals, pictures or decor of animals, or animals on different products for your animal count (same for plants) since you probably won't have a lot of real animals running about in your house (see example on page 11).

g. If you are doing a cultural inventory indoors, think about what items you can study that will tell about your culture; for example, books, artwork, types of food, toys, or technology (see example on page 13).
h. Decide how long to sample. In a Field Museum rapid inventory, our scientists might be out for days or even weeks, covering miles of land. For your practice, plan for 25 minutes.

3. **Conduct your rapid inventory!**
   a. Copy or use the Rapid Inventory Chart to record what you see. For animals or plants, use the chart on page 9. For cultural items, use the chart on page 10. First, write down your ideas (from step 2) of what you hope to find. You will add to the list as you find new things in your location, so leave space.
   b. Set your timer for 25 minutes and start the time! Walk around your chosen location writing down each item you see. If you see more than one of the same item on your list, mark tallies to count how many you find. Record as many items as you can until the timer goes off, then stop!
   c. You might see something that you've never seen before, or you don't know what it is. This happens to scientists quite often. Sometimes they've discovered a new species! If this happens, write down a description of your find on the back of your sheet. Take a picture of it or draw it as well. Then share it with others to see if they can help you identify your discovery.

d. Review your information. *What did you see the most of? The least of? Do you notice any patterns? Do you think your Rapid Inventory would be similar if you tried it on a different day?*
e. If you conducted a cultural inventory, think more specifically about what your results tell you about the people who live there. *Are there a lot of historical items? What kind of technology is present? Are there photos or books?*

Extensions:

- A nature preserve is a great place to conduct a rapid inventory (but remember to follow any posted rules and stay on the trails). Here are some tips!
    - Focusing on one type of creature (reptiles,
    - birds, or mammals, for instance) is a great way
    - to get started.
    - Be sure to check different spots. *What do you see in trees? In the dirt?*
    - Turn over a rotten log to check who's under there.
    - *Is there water around?* If so, there might be creatures in there too.
    - And don't forget to record the plants and terrain (land). *Are there lots of trees? Is it sandy, rocky, or dark soil?*
    - If there are any park employees present, go with an adult to ask them questions about the environment. *What is most important to protecting this area?* Learning from "locals" is a big part of doing a rapid inventory!
    - Remember, when you're done, leave nature just as you found it.

- If you're in the Chicagoland area a great resource for identifying what you discover is the Field Museum's Beginner's Field Guides to plants and animals. Or you can search over 1100 Field Guides from all over the world at: https://fieldguides.fieldmuseum.org/
- Do a rapid inventory as a team! If you have more than one person, you can work together like scientists would during a real rapid inventory. To do this, each person will divide up responsibilities to record a different group of animals or plants. For example, if you have three people, one person records mammals, one records trees, and one records birds. Share your results with each other and see what you can learn from the data!
- Conduct an out-the-window rapid inventory. If you can't get outside, but want to make your rapid inventory more true-to-life, try looking out the windows of your home to conduct it. You might identify the types of trees you see–look for differences in leaf shape, bark, or trunk thickness to make categories. You could watch for birds flying by or perching in trees. If you're not sure what they are, use color and size to help you place them into categories.

Rapid Biological and Social Inventory Info Sheet

What?

- Three intense weeks of documenting every plant and animal species possible within a selected area.
- Searching for new species never before documented by science.
- Learning about the culture of the people who live there, and working with them to protect their native ecosystem.

Why?

- Learning everything possible about important natural areas in order to protect them.
- Helping groups preserve and celebrate their unique cultures.
- Creating bridges between local people and the government to advocate for the conservation of natural resources in their homes.
- Providing governments support and data for creating national wildlife refuges.

Who?

- Field Museum scientists, as well as scientists from around the world.
- A carefully selected team of experts and past participants, who are experienced at conducting rapid inventories and have studied the local animals and plants.

- Participants from local communities, who can share their culture and who know the area and its wildlife like they know their backyard.
- Other agencies connected to the government and its conservation initiatives.

Where?

- Areas of the world largely unexplored by museum scientists, from China to Colombia, Peru to Cuba.
- Selected areas vital to creating new wildlife refuges and connecting existing ones.
- Much of the Field Museum's focus has been on areas of the Amazon in South America.

How?

- Plan, research, and study beforehand. Pick the area to study, and select a few locations of interest within that larger area. Put together your team. Use the Field Museum's vast collection of around 40 million specimens to determine what species live in the selected area (and be able to recognize what might be new to science!). Get permission from the government and local community leaders.
- Prepare for the trip. Get together your supplies. Make sure medical and communication safety measures are in place. Send an advance team to scout and create paths and helicopter landing areas, if necessary. They often arrive a month in advance.
- Conduct the Rapid Biological and Social Inventory. You'll be spending three weeks total in an incredible, but isolated, environment. Head to the first location to observe and document as many different plants and animals as possible. Record the natural landscape: the soil, the rock formations, the weather, and the elevation. Talk to local people and learn from them about the area, what is important to them, and how they live while taking care of the nature that surrounds them. Move to the next area, repeat.

- Study your data and put together a report. Determine the needs of both nature and the people in the area studied. Compose reports of the rapid inventory to share with local leaders and governmental conservation agencies to help advocate for protection of the valuable areas. Were any new species discovered? Work together towards opportunities for local people within the area to protect, manage, and care for their homes and their environment. And then take a well-deserved rest before planning the next one! Whew!

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These photos are from: Rapid Inventories 30: Rapid Biological and Social Inventories: A Field Museum Publication (Colombia: Bajo Caguán—Caquetá)

Rapid Inventory Chart: Biological

My Location: _____ Date: _____

Scientist Name(s):_____ Time:_____

Permission from Local Leaders: _____

Habitat Type: _____ Terrain: _____

Animal or Plant Name	How Many Were Seen

Rapid Inventory Chart: Cultural

My Location: _____ Date: _____

Scientist Name(s):_____ Time:_____

Permission from Local Leaders: _____

Room(s): _____ Use: _____

Object	How Many

Rapid Inventory Chart: Example (Indoors)

My Location: _My House (First Floor)__ Date: _4/22/2020__

Scientist Name(s):__Charles Dargan__ Time: _30 minutes_

Permission from Local Leaders: __YES: Mom and Sister____

Habitat Type: _Indoor__ Terrain: _Flat, with Furniture____

Animal or Plant Name	How Many Were Seen
Giraffe	20
Elephant	3
Horse	3
Rabbit	19
Squirrel	15
Chipmunk	3
Lion	4
Turtle	25
Pig	3
Opossum	4
Dog	11
Cat	4
Duck	3
Aloe Plant	3
Hibiscus Plant	2
Avocado Plant	1

Rapid Inventory Chart: Example (Outdoors)

My Location: _My Backyard__ Date: _5/11/2020__

Scientist Name(s):__Charles Dargan__ Time: _30 minutes_

Permission from Local Leaders: __YES: Dad____

Habitat Type: _Outdoor_ Terrain:_Flat- Grass, Trees, Low Plants_

Animal or Plant Name	How Many Were Seen
Grey Squirrel	0
Rabbit	0
Chipmunk	1
Nuthatch	1
House Sparrow	2
Downy Woodpecker	1
House Wren	1
Fern	290 (estimate)
Lily of the Valley	260 (estimate)
Quince Bushes	2
Rose of Sharon	4
Hostas	8
Peach Tree	1
Apple Tree	1

Rapid Inventory Chart: Example (Cultural)

My Location: _Dargan House__ Date: _5/18/2020__

Scientist Name(s):__Charles Dargan__ Time: _25 minutes_

Permission from Local Leaders: __YES: Mom and Dad____

Room(s): _First Floor, All Rooms_ Use:_Family Living Space_

Object	How Many
Computer/Tablet	4
Refrigerator	1
Television	1
Pizza-Related Item	7
Basketball-Related Item	6
Chicago Cubs Related Item	8
Dinosaur-Related Item	14
Animal Sculpture/Art	43
Family Photo	11
Cross (Religious)	4
Houseplant	21
Bed	2
Animal-Related Item (General)	193