

Tracking Polar Bears

Polar Bears International Interactive Map Project



Overview

How much do you really know about polar bears? Are they friendly? Where do they live? Do they only live there? Do they do different things in the summer and winter? How far do they walk in a single winter? If you follow the instructions very carefully, you'll learn a lot more about polar bears than you ever imagined.

Things that You'll Need

- Printout of this sheet
- Explore three polar bear topics of interest here: <https://polarbearsinternational.org/polar-bears>
- Access the polar bear map: <https://polarbearsinternational.org/polar-bears/tracking/>
- Watch a tutorial on how to use the interactive map:
https://www.youtube.com/watch?v=MR4mO54ks_M

Instructions

- 1) Watch the short tutorial on how to use the map. It's a bit confusing at first but once you learn it, it's easy.
- 2) Work through the questions below and track those polar bears!

Questions

Orientation questions

- 1) What country are the bears in?
 - a) Greenland
 - b) Canada
 - c) Alaska
 - d) United States

- 2) What lake or sea are the bears on?
 - a) Lake Michigan
 - b) Atlantic Ocean
 - c) Hudson Bay
 - d) Lake Ontario

- 3) If you go to the end of the timeline, how many bears are there?
- a) 5
 - b) 6
 - c) 7
 - d) 8



- 4) Click on the dark green bear. What is its name?
- a) Vilma
 - b) Hope
 - c) Ursula
 - d) Fang

- 5) In miles, how far has the dark green bear traveled (click on the bear)?
- a) 264 miles
 - b) 1,264 miles
 - c) 2,264 miles
 - d) 3,264 miles

Understanding the Map Better

- 6) Which of the following best explains why there are only a handful of bears on the map?
- a) There are only seven bears in Canada
 - b) No particular reason
 - c) The scientists were only able to put collars on seven bears
 - d) They couldn't catch the rest of the bears
- 7) Click on the "play" button for the time scale at the top. Watch most of the video/interactive feature. Why do some bears appear to be standing still while other move around?
- a) Some bears are sick or injured
 - b) Some bears walk more than others
 - c) Some hibernate for years
 - d) The collars are probably turned off or broken

- 8) Click on the “play” button for the time scale at the top. Watch most of the video/interactive feature. Why do some bears appear to be standing still while other move around?
- a) Some bears are sick or injured
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Why Polar Bears Migrate

- 9) Start the time slider at Oct 1, 2019. Let’s watch the bears for a full year, until Oct 1, 2020. When do the bears begin moving?
- a) On October 1
 - b) On Nov 7
 - c) On December 1
 - d) On January 1

10) Why you think the bears started moving then?

- a) It’s when their collars were turned on
- b) They were hibernating
- c) They’re starting to hunt for penguins
- d) It’s winter so the sea ice is beginning to form.



11) Pause it on January 15, 2020 (or close). What explains why the bears are moving further into the middle of the water? (**Hint:** if you pause the timer every week)

- a) They’re getting braver
- b) The sea ice is more formed
- c) They’ve already eaten all the seals close to shore
- d) They’re territorial so they’re spreading out

12) Pause it on May 1, 2020 (or close). What explains why the bears have moved closer inland?

- a) The sea ice is thawing
- b) The bears are getting ready to hibernate
- c) They’re getting territorial
- d) They’ve eaten all the seals in the middle of the bay

13) What is the big seasonal pattern for the polar bear movement?

- a) They leave land in fall and return from the sea ice in spring
- b) They leave land in summer and return from the sea ice in winter
- c) They stay out at sea all year
- d) They stay close to land all year

14) Let's confirm our answer from #13 with a single bear. Following the instructions on the tutorial to select only the bear named "Tenya". Set the timer to October 2019 and watch Tenya until July 2020. Does she follow the same seasonal pattern as the other bears?

- a) Yes, exactly
- b) No, not at all
- c) I'm not sure

15) As far as you can tell from this interactive map, what seems to be critical to the bears' seasonal movements?

- a) Availability of food
- b) The thickness and coverage of sea ice
- c) The daily weather
- d) Tourist season from people

Check your answers below. Watch the entire map from beginning to end and enjoy everything that you've learned!

Rubric

13 – 15 Correct – You're a polar bear scientist!

10 – 12 Correct – You're an scientist helper

7 – 9 correct – You're a polar bear student

4 – 6 Correct – You're a polar watcher

Less than 4 correct – Try the exercises again!



Answer Key

Question	Answer
1	B
2	C
3	C
4	C
5	C
6	C
7	D
8	D
9	A
10	D
11	B
12	A
13	A
14	A
15	B