EXPERIENCE COMPANION · AGES 10–15

Build a Laker

Name _____

Date _____

Great Lakes ships are shaped by the locks and channels they must fit. Design ships in different years from 1870 to 1972, launch them, take them on a trial and into the lock, and compare them with real ships of their time.

Open it: inthelakes.ca/learn/experiences/shipyard · About 30–45 minutes

1 1870 and 1875 · Wood

1870: load the R. J. Hackett, then turn her hogging arches off. What happens, and why?

The Welland Canal's locks were 150 feet long and 26½ feet wide. Choose a route. Why might an owner pick each one?

Your design, then press "Load a typical canaller":

What	My ship	The real one
Length × beam × depth (ft)		
Draft (ft)		
Cargo per trip (t)		
Round trips in a season		

2 1906 · Steel straight-decker

Make her as big as you can and still pass every check. What stopped you from making her bigger?

Take her on the trial:

What	My ship	The real one
Size (ft)		
Measured mile (mph)		
Turning circle (ship lengths)		
Roll in the gale (°)		

❸ 1959 and 1972 · The Seaway and the Poe

1959: the Arthur B. Homer is 730 by 75 feet. Why might her owners have built her exactly that size?

Try "Whole on the coast". What goes wrong, and how did the Stewart J. Cort get around it?

The Poe Lock is 1,200 by 110 feet. How much room does the Cort have on each side?

❹ Into the lock

Pick one ship and steer her into her lock on the trial.

Ship and year	Lock	Room each side (ft)	Times she touched

❺ In your own words

Ships got about 7 times longer from 1875 to 1972. What changed that let them grow?

A wide ship rolls back quickly and a narrow one slowly. Which would you rather sail in a November gale, and why?