

THREADS OF LIGHT

Data Centers #7 · A Channel 5 Kids Adventure
with Lena Ashgrove and the Infrastructure Guard



CREDITS

Threads of Light · Data Centers #7 · Kids edition (ages 6–9)

Story and production: GOTB Consulting, Chicago

Starring Lena Ashgrove, Undertow, Commons and Gridline

AI-GENERATED ART, FICTIONAL CHARACTERS

All characters, the town of Prairie Bend and Channel 5 are fictional. Any resemblance to real people is a coincidence. No real logos are shown.

Facts in this book were checked against public sources before printing.

Beach safety: swim only with a grown-up and a lifeguard, and leave cables and buoys alone!

© 2026 GOTB Consulting. All rights reserved.

MEET YOUR GUIDES



**LENA
ASHGROVE**

Channel 5 host. She asks the big questions.



UNDERTOW

Ocean hero. Walks the sea floor.



COMMONS

Public works boss. Lantern up!



GRIDLINE

Keeps the power moving.

CHANNEL 5 · MORNING

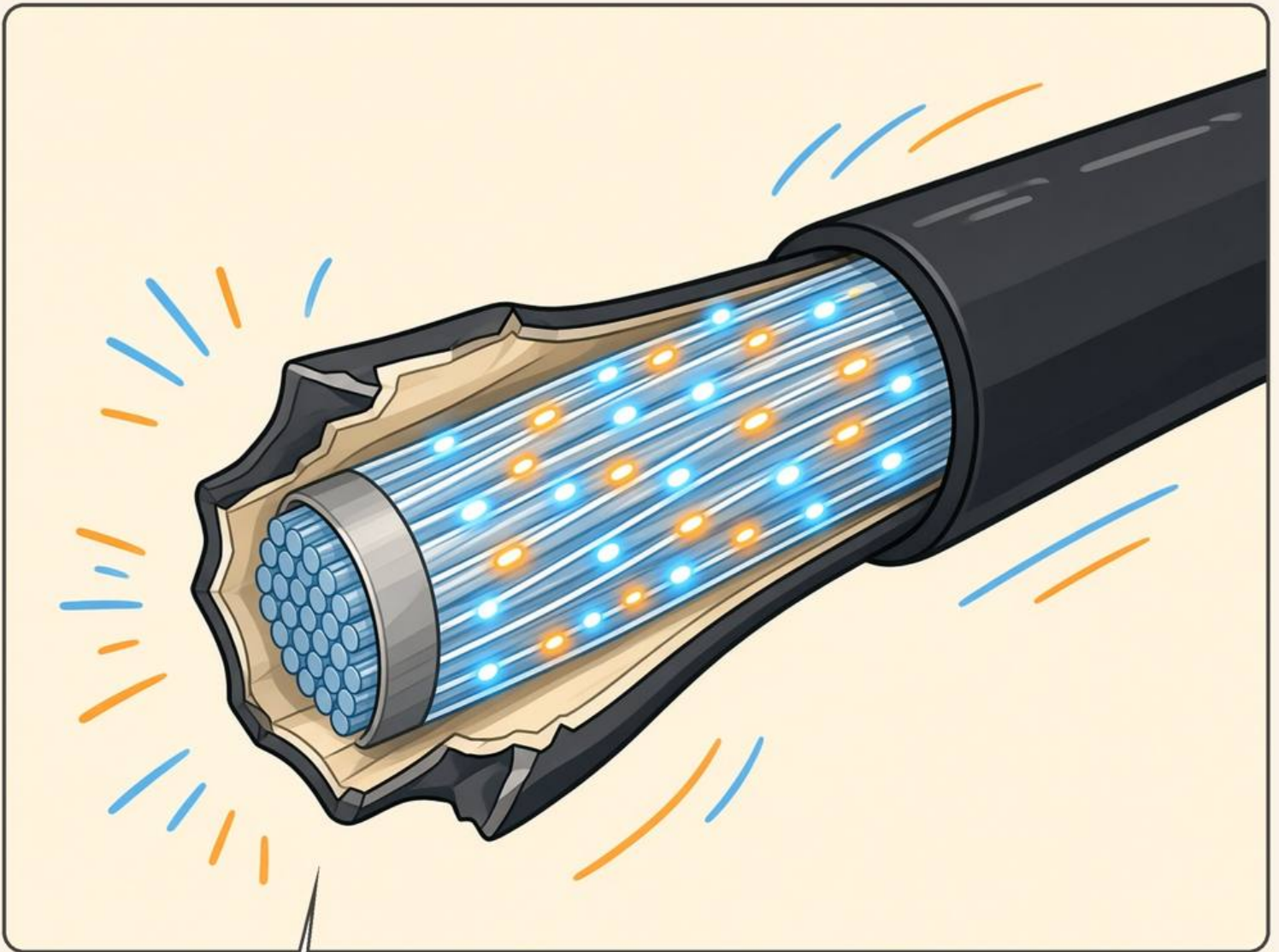


LENA

HOW DOES A VIDEO CALL REACH GRANDMA
ACROSS THE OCEAN? LET'S FOLLOW IT!

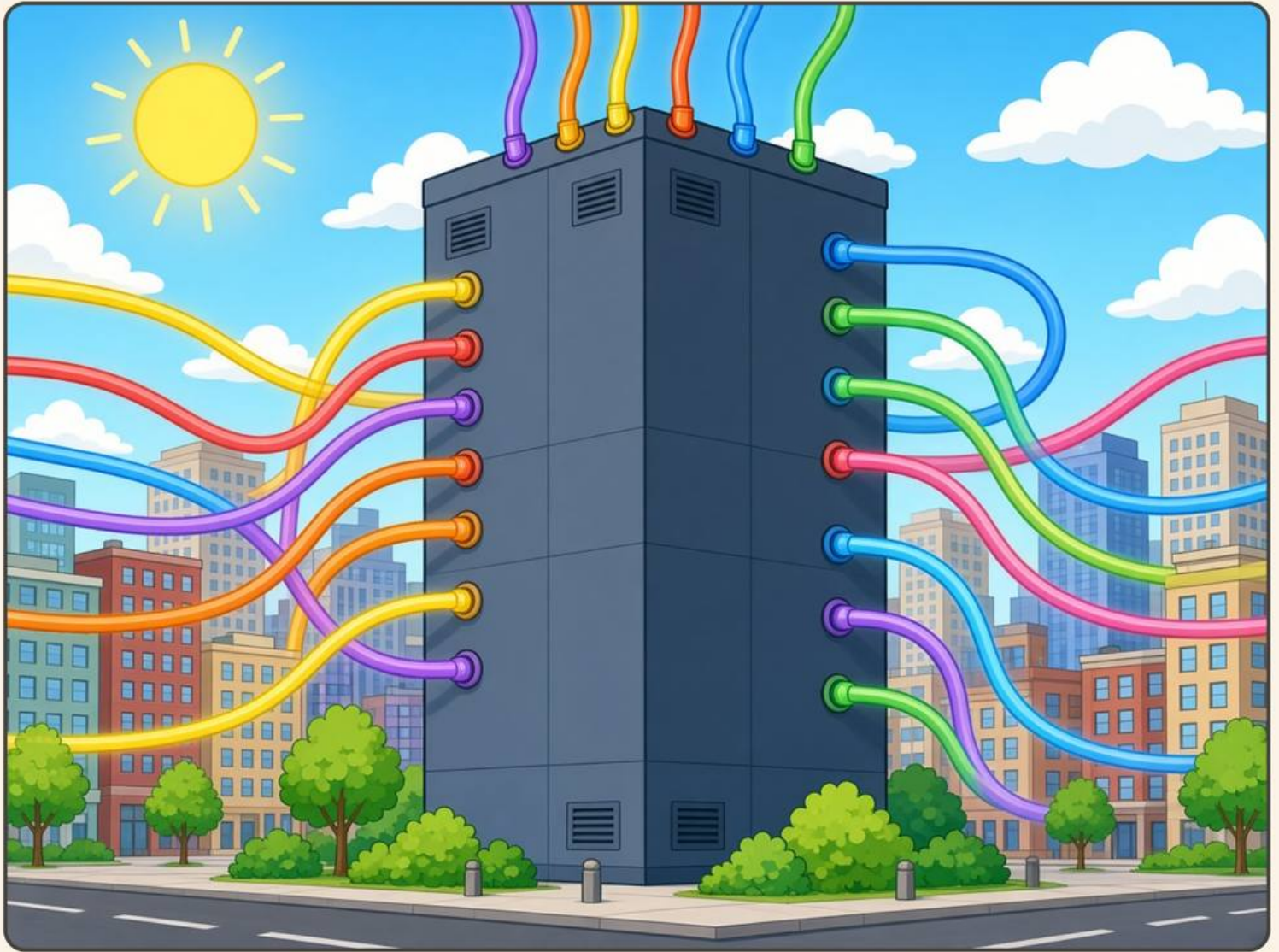


Your phone sends the call through the air only to the nearest tower. Then it travels through cables!



LENA

THOSE CABLES HAVE GLASS THREADS AS THIN
AS A HAIR. MESSAGES ZOOM THROUGH THEM
AS LIGHT!



REPORTED

In Chicago, one big building connects more than 70 networks.



UNDERTOW

NEAR THE BEACH, THE CABLE HIDES UNDER
THE SAND WHERE IT'S SAFE.



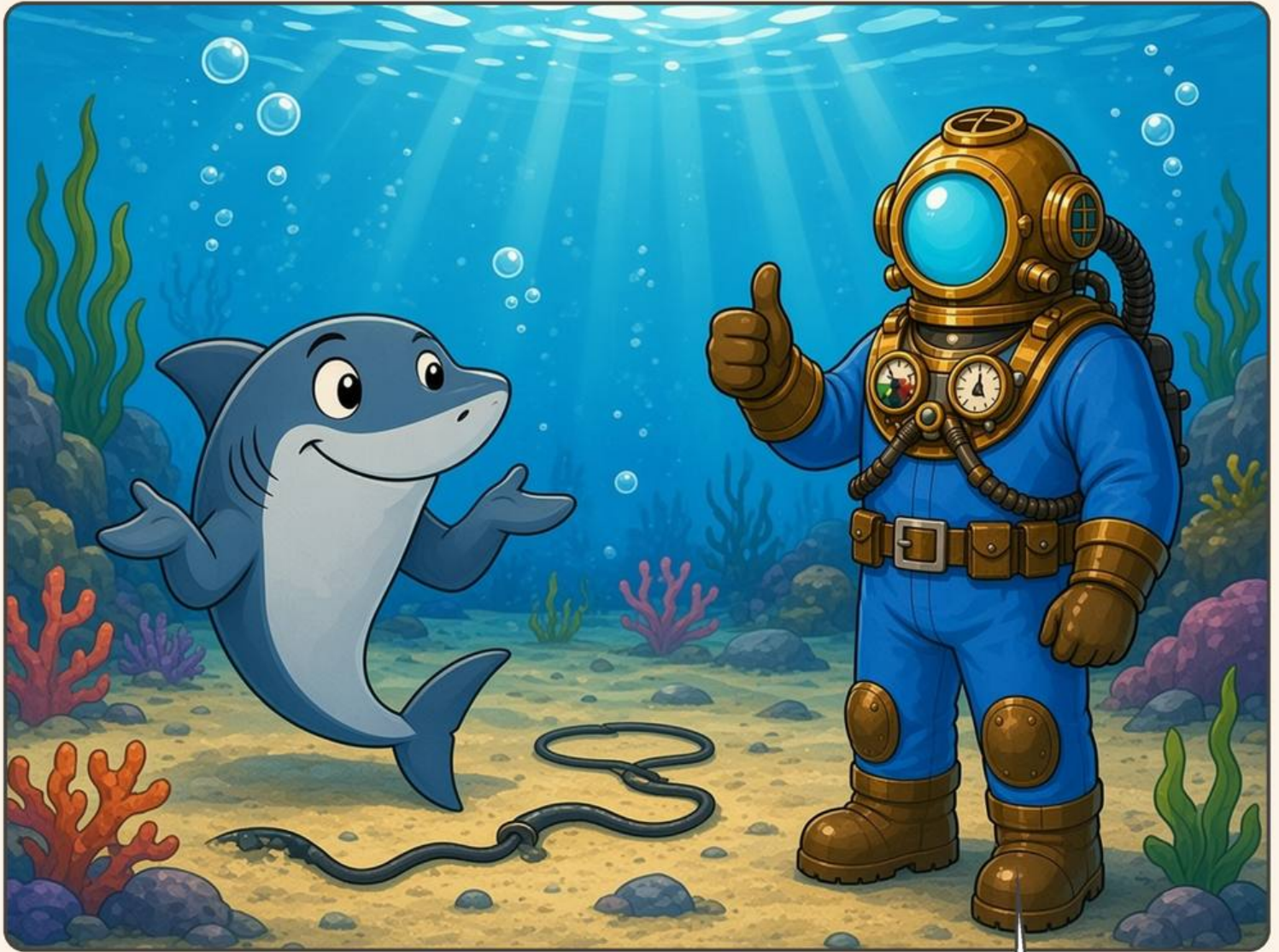
UNDERTOW

OUT IN THE DEEP OCEAN, THE CABLE IS ABOUT
AS WIDE AS A GARDEN HOSE!



LENA

THERE ARE MORE THAN 600 OCEAN CABLES,
BUILT OR PLANNED. THEY WRAP THE WORLD
LIKE RIBBONS!



UNDERTOW

DO SHARKS BITE CABLES? ALMOST NEVER!
FISHING GEAR AND SHIP ANCHORS CAUSE
MOST BREAKS.



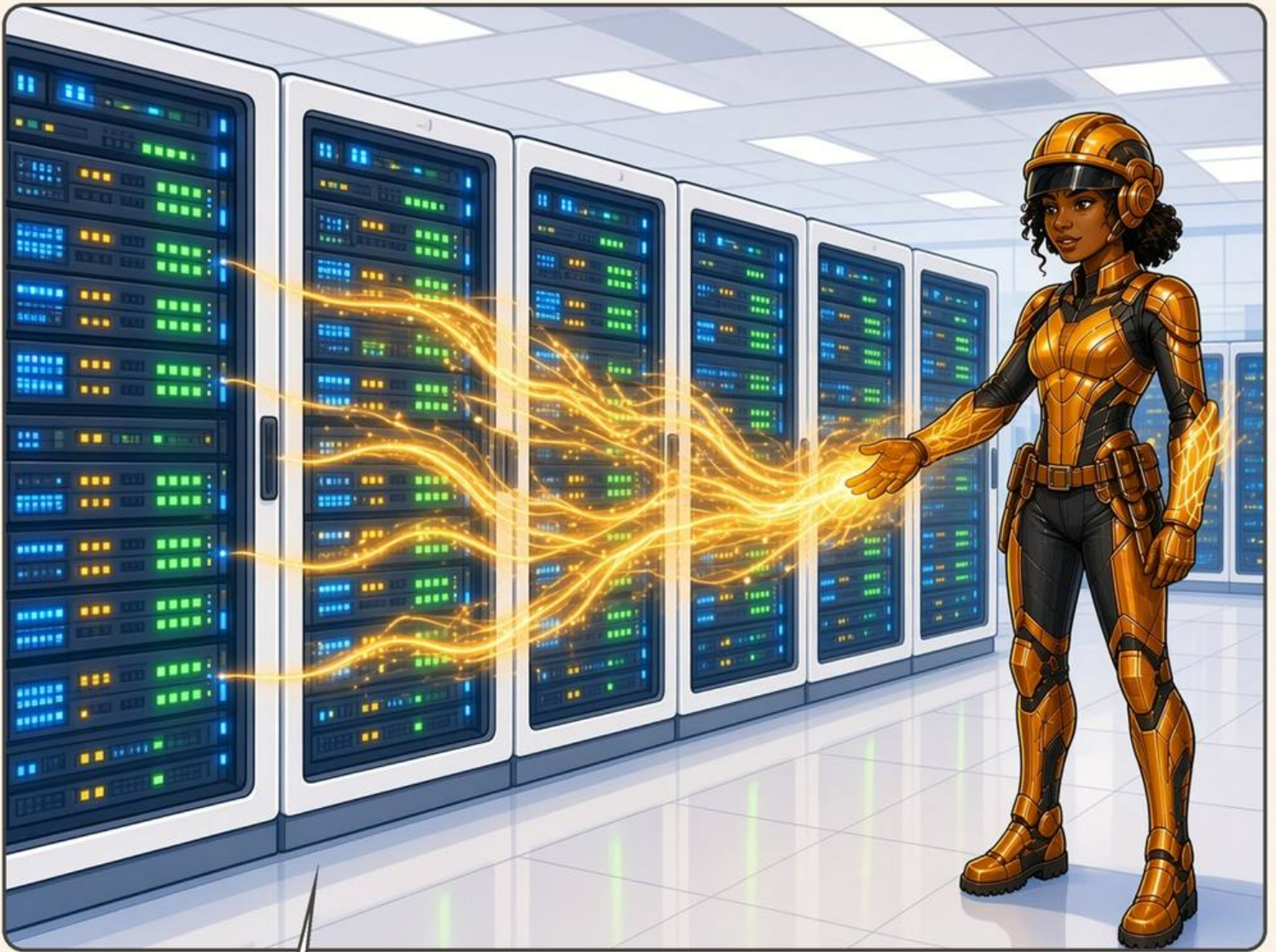
COMMONS

WHEN A CABLE BREAKS, A REPAIR CREW SAILS
OUT TO FIX IT.



LENA

MESSAGES CAN TAKE ANOTHER CABLE, SO THE
CALL KEEPS GOING!



GRIDLINE

CABLES CARRY THE MESSAGE. ELECTRICITY
POWERS THE COMPUTERS AT EACH END!



LENA

HI, GRANDMA! THANKS FOR RIDING THE LIGHT
WITH CHANNEL 5!

Made with GOTB Consulting, who help plan the power, water and public works behind places like this.

WORDS TO KNOW

CABLE

A long, strong line that carries messages.

FIBER

A glass thread as thin as a hair.

LIGHT PULSE

A tiny flash that carries a message.

CELL TOWER

A tower that catches your phone's signal.

SEA FLOOR

The bottom of the ocean.

REPAIR SHIP

A boat that fixes broken cables.

DATA CENTER

A building full of computers.

NETWORK

Many paths connected together.

HOW A CALL CROSSES THE OCEAN

Trace the path with your finger, from start to finish.

PHONE

You say hi!



TOWER

The signal flies to a tower.



CABLE

It zooms into a glass thread as light.



OCEAN

It races along the sea floor.



SHORE

It comes up under the beach.



GRANDMA

Hi, sweetie!

WORD SEARCH

Find these words. They go across, down, or slanted.

L	L	D	U	L	D	P	F	T	I	U	N
C	I	L	Y	W	I	W	H	R	E	O	W
D	T	O	T	E	W	G	M	O	U	A	I
R	D	T	O	W	E	R	H	K	N	U	T
K	B	E	A	C	H	N	V	T	R	E	R
F	I	B	E	R	S	C	A	B	L	E	H
A	H	B	K	C	P	S	H	I	P	O	I
O	C	E	A	N	S	S	A	N	Y	R	I
D	O	H	A	P	T	H	E	I	M	F	I
T	H	F	H	U	J	A	L	G	B	D	N
B	L	A	N	T	E	R	N	Y	D	C	C
R	N	G	R	Y	I	K	I	G	P	O	V

CABLE

FIBER

LIGHT

OCEAN

TOWER

SHIP

SHARK

BEACH

PHONE

LANTERN

QUICK QUIZ

Circle the best answer!

1. How many ocean cables are built or planned?

More than 600

Just 2

2. How wide is a deep-sea cable?

About a garden hose

As wide as a bus

3. What causes most cable breaks?

Fishing gear and anchors

Sharks

4. Who fixes a broken cable?

A repair ship crew

A goldfish

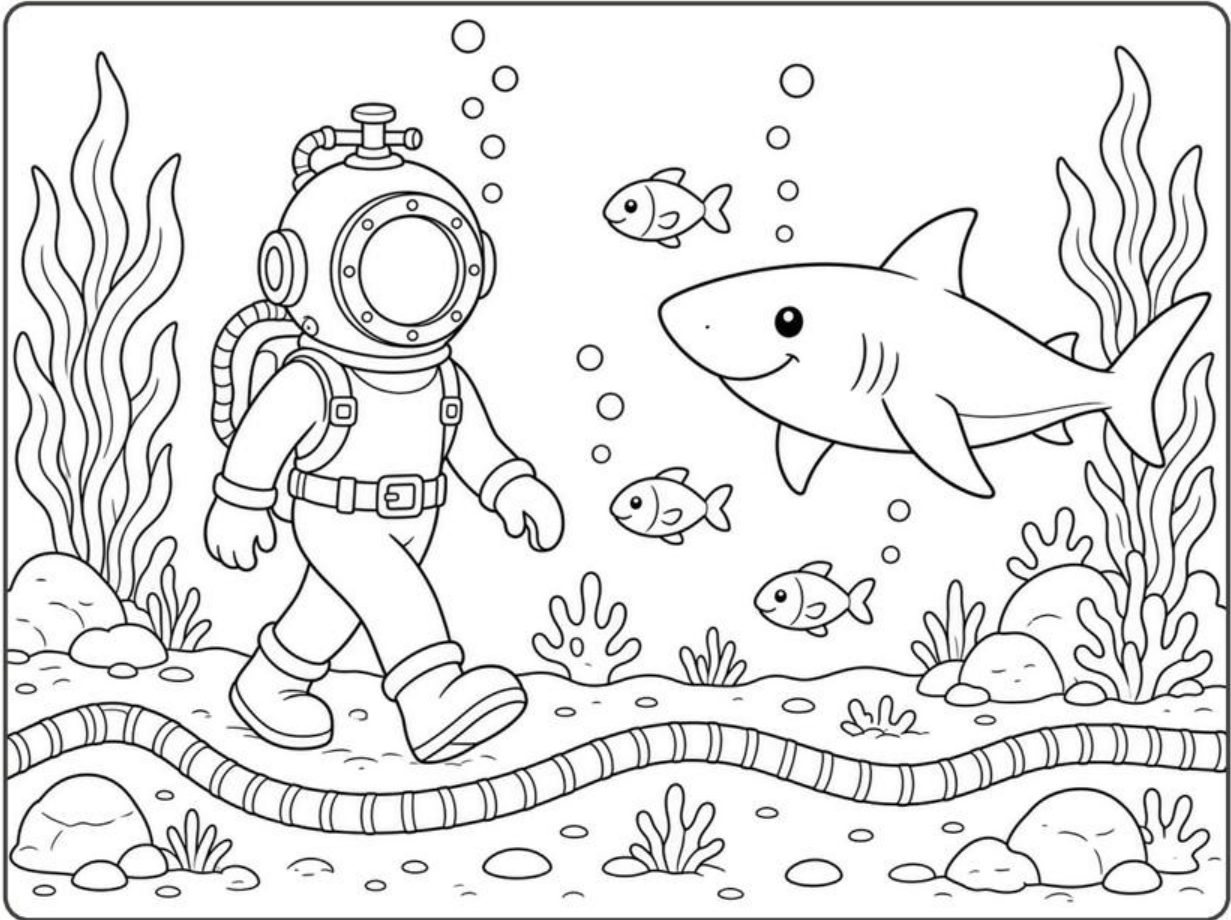
5. How do messages travel in fiber?

As light

As soup

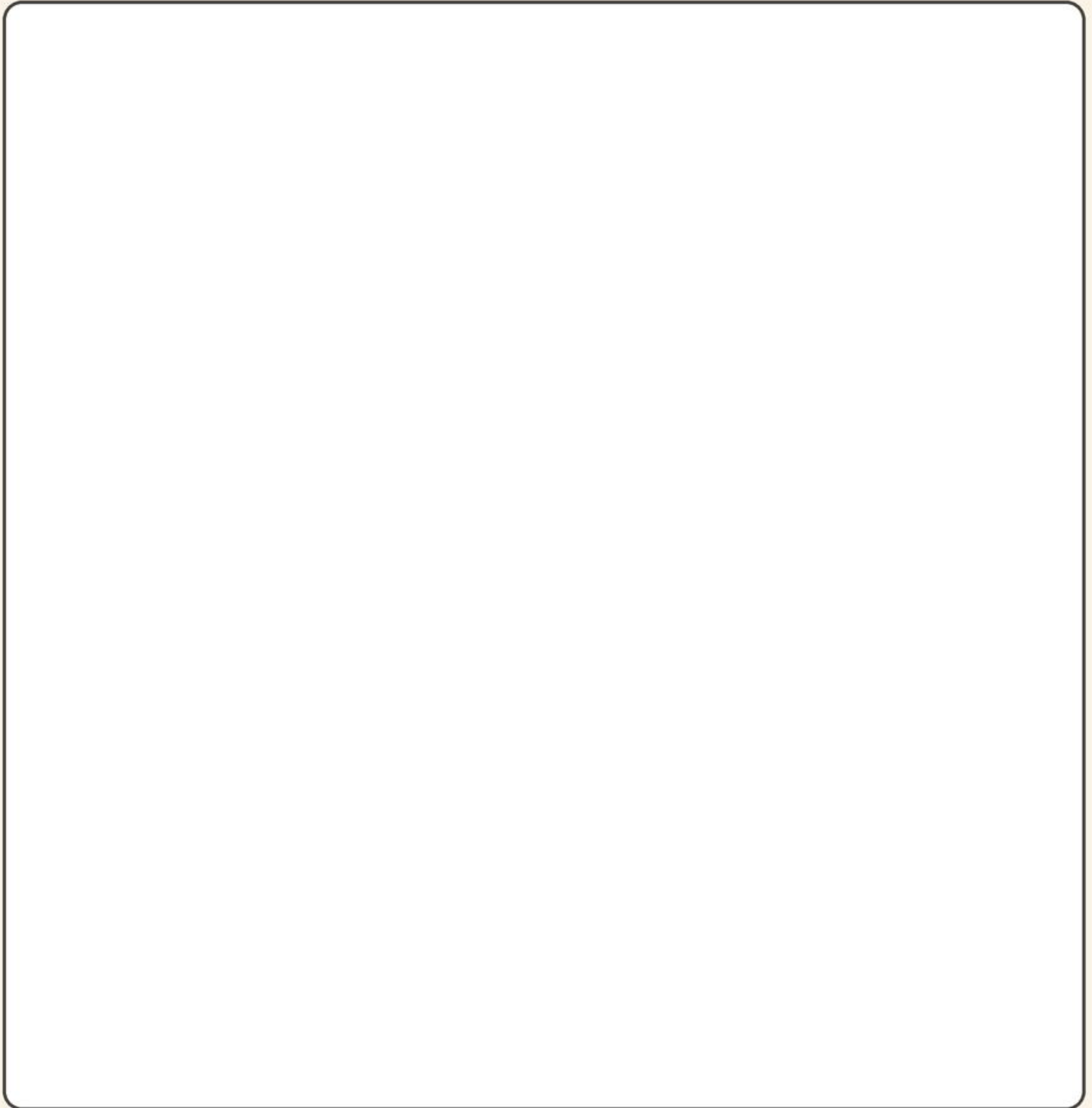
Answers: 1 more than 600 · 2 about a garden hose · 3 fishing gear and anchors · 4 a repair ship crew · 5 as light

COLOR THE SEA FLOOR



DESIGN YOUR REPAIR SHIP

Draw a ship that could fix a cable far out at sea!



My ship is called: _____

LET'S TALK ABOUT IT

Questions to share with a grown-up

WHO WOULD YOU CALL ACROSS THE OCEAN?

WHY DO CABLES HIDE UNDER THE SAND NEAR
THE BEACH?

WHY IS IT GOOD TO HAVE MORE THAN ONE
CABLE?

WHAT JOB ON A REPAIR SHIP WOULD YOU
LIKE?

ABOUT GOTB CONSULTING

GOTB Consulting is a Chicago team that helps plan the big systems towns depend on.

We work on four things you saw in this book:

DATA CENTERS

Where the cloud lives

POWER

Electricity for homes and buildings

WATER

Clean water and smart cooling

PUBLIC WORKS

Roads, pipes and places for people

THE END!



THANKS FOR RIDING THE LIGHT!

Next time: more adventures with the Infrastructure Guard!

GOTB CONSULTING • CHICAGO

Data centers • Power • Water • Public works

AI-generated art, fictional characters