



destination



exploration

STEM **Activity Booklet** for Ages 6+

CELEBRATE

20 YEARS

WITH US

Founded in 2002, Destination Exploration (DE) started with two small programs and engaged just 30 students that first year. Over the last two decades we've grown to reach over 5,000 students and community members annually.

We want to thank all the families, students and UofL faculty and staff who have had a part in making DE what it is today. With our permanent home in the Science Commons, we are excited to see what the next 20 years bring.

Please enjoy this family activity booklet filled with games, project ideas and cool STEM facts. Remember to share what you do online by using #20yearsofDE!



MAKER CHALLENGES

Challenge 1 – Paper Maze

Use the paper to make tunnels, bridges and pathways on your thicker base. See if you can get your marble through the maze just by turning the base

Supplies:

- 1 piece of card-stock or cardboard (cereal boxes work great)
- 2 sheets of paper
- Tape
- Marble/small ball



Challenge 2 – Trash to Treasure

Using items you find in the recycling or dry garbage, try to create something useful to use in your house or room!



Material Options:

- Paper Towel Rolls
- Plastic bottles
- Egg cartons
- Newspaper



Challenge 3 – Catapult

Using the plastic spoon as the main launcher, use the other materials to create a spring-like system to launch a cotton ball or pom pom.



Supplies:

- Elastic Bands
- Plastic Spoons
- Popsicle Sticks
- Cotton Ball



WORD SEARCH

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

ACTUA

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CAMPS

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EXPLOSIONS

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KIDS

MATH

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OUTREACH

PROJECTS

ROBOTS

SCIENCE

TECHNOLOGY

ULETHBRIDGE

START HERE

Looking back at History

Discovering new Inventions

Watch

Make

I find this type of technology really cool

Machines

Art

Favourite type of projects in school

Art/Building

Written

Tik Tok or YouTube

YouTube

Tik Tok

Do you like to cook?

Yup

Nope

I love working with _____ of people

Just a few

LOTS

Biology is SO COOL!

I prefer rocks

Totally

I like to hang out...

Inside

Outside

Ideal vacation spot

Somewhere
HOT

Somewhere COLD



Amit Patel

Did you know he is working to build the EA Games office campus in Burnaby, BC?



Jessica Watkins

You'll find her playing sports or writing when she's not studying geology on earth... and MARS!



Dr. James Makokis

James is a Nehiyo family physician from Saddle Lake Cree Nation in AB! He is a two-spirited person and his work combines traditional Cree and Western medical practices to help improve trans healthcare in his community and around the world. He also won "The Amazing Race Canada"!



Salwa Radwi

Salwa's work lets her enable artists to create in the new digital world!

Binary

Bracelets & Key Chains



1. Pick a word or use your initials.
2. Find what code/pattern to use for each letter.
3. Lay out your dark and light beads to match.
4. Thread them on your string!

Materials

- String or Pipe cleaner
- Beads [2 colours]

What is Binary?

Binary code is based on a system in which there are only two possible states! Those states can be any two things, even apples and oranges. Most people think of the binary code used in electronic devices like computers, represented by ones and zeros. But did you know it can also be seen in the long and short tones in Morse code, the raised and flat areas of braille and the On and Off electrical pulses used by electronics. Binary is the language that allows computers and other devices to store, send and receive information.

BINARY CODES

each letter is represented by 8 light or dark values

A ■ ■ ■ ■ ■ ■ ■ ■

B ■ ■ ■ ■ ■ ■ ■ ■

C ■ ■ ■ ■ ■ ■ ■ ■

D ■ ■ ■ ■ ■ ■ ■ ■

E ■ ■ ■ ■ ■ ■ ■ ■

F ■ ■ ■ ■ ■ ■ ■ ■

G ■ ■ ■ ■ ■ ■ ■ ■

H ■ ■ ■ ■ ■ ■ ■ ■

I ■ ■ ■ ■ ■ ■ ■ ■

J ■ ■ ■ ■ ■ ■ ■ ■

K ■ ■ ■ ■ ■ ■ ■ ■

L ■ ■ ■ ■ ■ ■ ■ ■

M ■ ■ ■ ■ ■ ■ ■ ■

N ■ ■ ■ ■ ■ ■ ■ ■

O ■ ■ ■ ■ ■ ■ ■ ■

P ■ ■ ■ ■ ■ ■ ■ ■

Q ■ ■ ■ ■ ■ ■ ■ ■

R ■ ■ ■ ■ ■ ■ ■ ■

S ■ ■ ■ ■ ■ ■ ■ ■

T ■ ■ ■ ■ ■ ■ ■ ■

U ■ ■ ■ ■ ■ ■ ■ ■

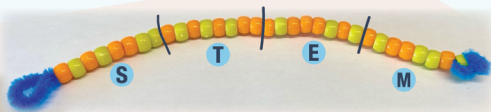
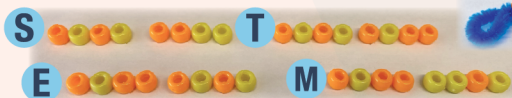
V ■ ■ ■ ■ ■ ■ ■ ■

W ■ ■ ■ ■ ■ ■ ■ ■

X ■ ■ ■ ■ ■ ■ ■ ■

Y ■ ■ ■ ■ ■ ■ ■ ■

Z ■ ■ ■ ■ ■ ■ ■ ■

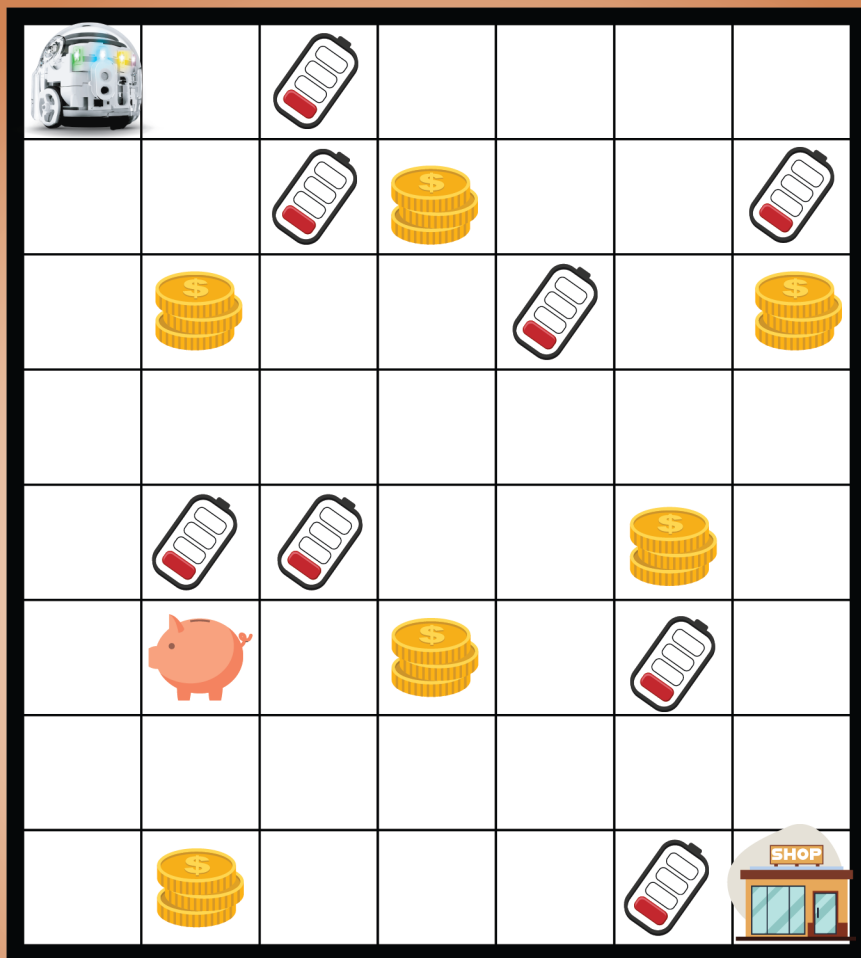


Try making a key chain
for someone else.

Then only they will know it has a
hidden message coded in the pattern!

Help Ozobot Save for New Upgrades!

Ozobot needs to collect its piggy bank, upgrade coins and head to the shop... but beware of running out of battery!



Use the 4 types of arrows to guide your Ozobot through the puzzle. Try only using one code in an empty space. Once you have completed one pathway, try making a new one in a different colour!

Want a challenge? Try collecting the piggy bank first before the coins. Or roll a dice to see how many coins you have to collect!



WALLACE'S FLYING FROG

Wallace's Fly Frogs, also known as parachute frogs, live exclusively in the trees of Malaysia and Borneo jungles!

1. Colour in your frog's design
2. Cut out frog & launch cap rectangle
3. Roll the rectangle into a tube around a straw - make sure it slides easily
4. Use tape to hold that shape, and remove from the straw.
5. Pinch one end and tape shut.

We have to close off one end so the air doesn't escape and our frog can launch.

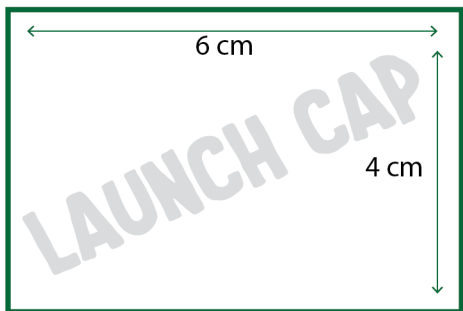


6. Tape the launch cap to the back of your frog.
7. Load on the end of your straw
8. BLOW!



WHAT YOU NEED:

- A straw
- Tape
- Scissors
- Markers





FriYAY
CLUBS

GR. 1-2

Friday
Afternoons
from 1:00pm - 4:30pm

GR. 3-6

FALL
2022

Session 2: Nov 4, 18, 25 & Dec 2

STEM WORKSHOP

Field Trips

AND

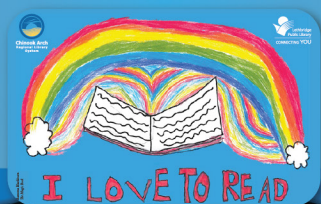
Traveling
Lab Coats



Did You Know

You can get your Lethbridge Public
Library card online AND for no fee in 2022?

Visit lethlib.ca and start exploring our collection today!

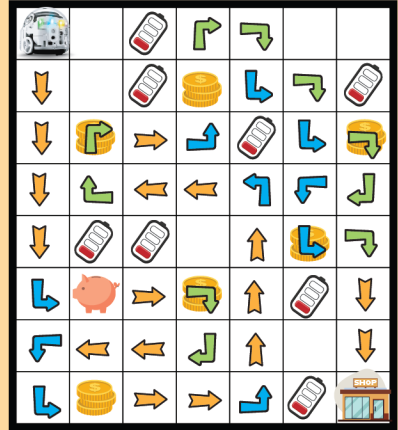
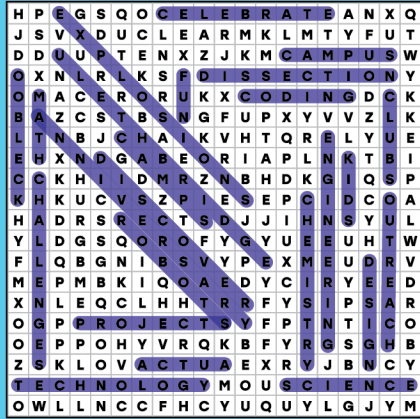


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CONNECTING
YOU

ANSWER KEY

WORD SEARCH

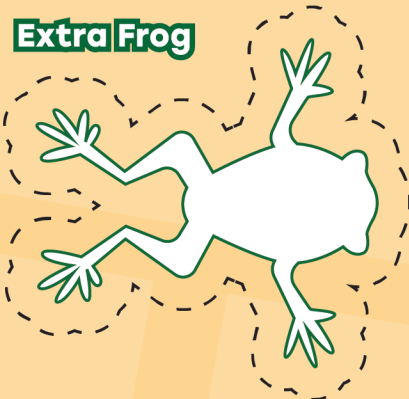


Piggy Bank First Option

Trash to Treasure Examples



Extra Frog

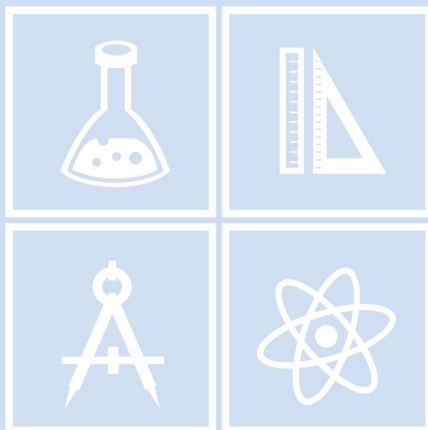


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Check us out on YouTube!

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#AtHomeWithDE

www.uleth.ca/destination-exploration