

The Energy Adventures of Tommy and Remi

The Case of the Shiny Roof



**UNIVERSITY
OF ALBERTA**

Energy Systems

The Energy Adventures of Tommy and Remi



The Case of the Shiny Roof Grade 3 and Under



The sun is such an important part of life on Earth and we use it in so many ways. Describe three ways we use the energy from the sun:

- 1.
- 2.
- 3.

As the book explains, we can use the energy from the sun to generate electricity using solar panels, like those on Remi's roof. With an adult, go on an adventure to find solar panels in your community. Where were they?

Design your own home that uses the energy from the sun. Draw or describe it below. Consider the things from the book, but also anything else you like.

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The Case of the Shiny Roof Grade 4 to 6



We learned a lot about solar energy in this book. What are three positives and negatives of solar energy? You may need to do some extra research.

Positive	Negative

As the book explains, we can use the energy from the sun to generate electricity using solar panels, like those on Remi's roof. With an adult, go on an adventure to find solar panels in your community. Where were they?

Design your own home that uses the energy from the sun. Draw or describe it below. Consider the things from the book, but also anything else you like.



Build Your Own Solar Oven



You may have seen the solar oven outside Reginald's house. Now it's your turn to build one.

Here are the supplies you'll need:

- A clean pizza box or shoe box with a hinged lid
- Marker
- Scissors
- Tape
- Glue stick
- Ruler or stick
- Black paper
- Tinfoil
- Plastic wrap
- Newspaper or fabric
- A pie plate
- Something to cook - s'mores, a hot dog, nachos, toast, cheese
- Oven mitts

Let's get started!

1. On the closed box, draw a rectangle on the lid an inch or two in from the edge, other than the edge at the hinge.

2. Cut the three edges to create a flap. The hole left in the box is the window.

3. Line the inside of the flap with tinfoil, shiny side out, using tape or glue.

4. Open the box and tape down a double layer of plastic wrap on the inside of the window. Tape all around the edges to keep the heat trapped inside.

5. Glue or tape black paper on the bottom of the inside of the box. Black absorbs heat which will help the food cook.

6. Tape crumpled up newspaper or fabric around the inside edges of the box (make sure it still closes). This insulates the box.

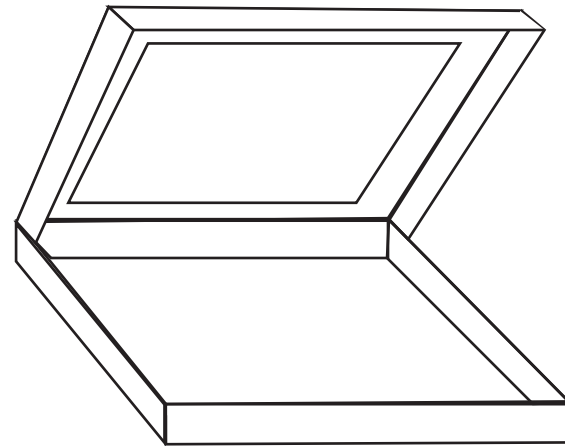
7. Put the oven outside in the sun. Place the food on the pie plate in the oven and shut the lid.

8. Tilt the flap so the tinfoil is reflecting sun into the box. The heat will start to build up inside because it can't escape through the plastic wrap or the newspaper you used to insulate. Use a ruler or stick to hold it open.

9. Adjust the flap's angle as needed to keep the sun directed in the oven.

10. Leave the box until the food is cooked. Careful it might be hot! Use oven mitts to remove the food.

11. Check with an adult to make sure the food is ready to eat, then enjoy!



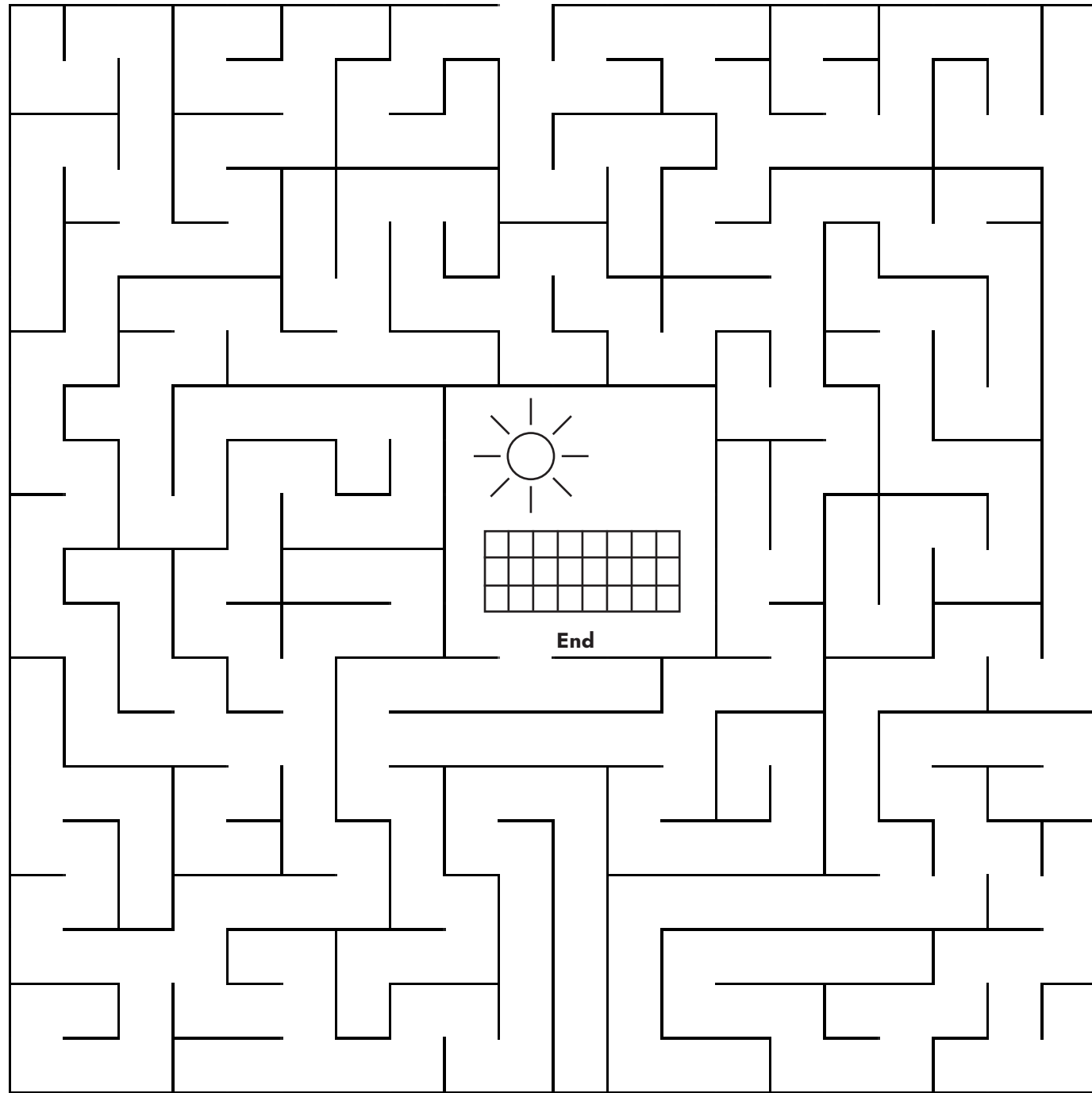
The Energy Adventures of Tommy and Remi



The Case of the Shiny Roof
Help Tommy and Remi find the solar panel.



Start



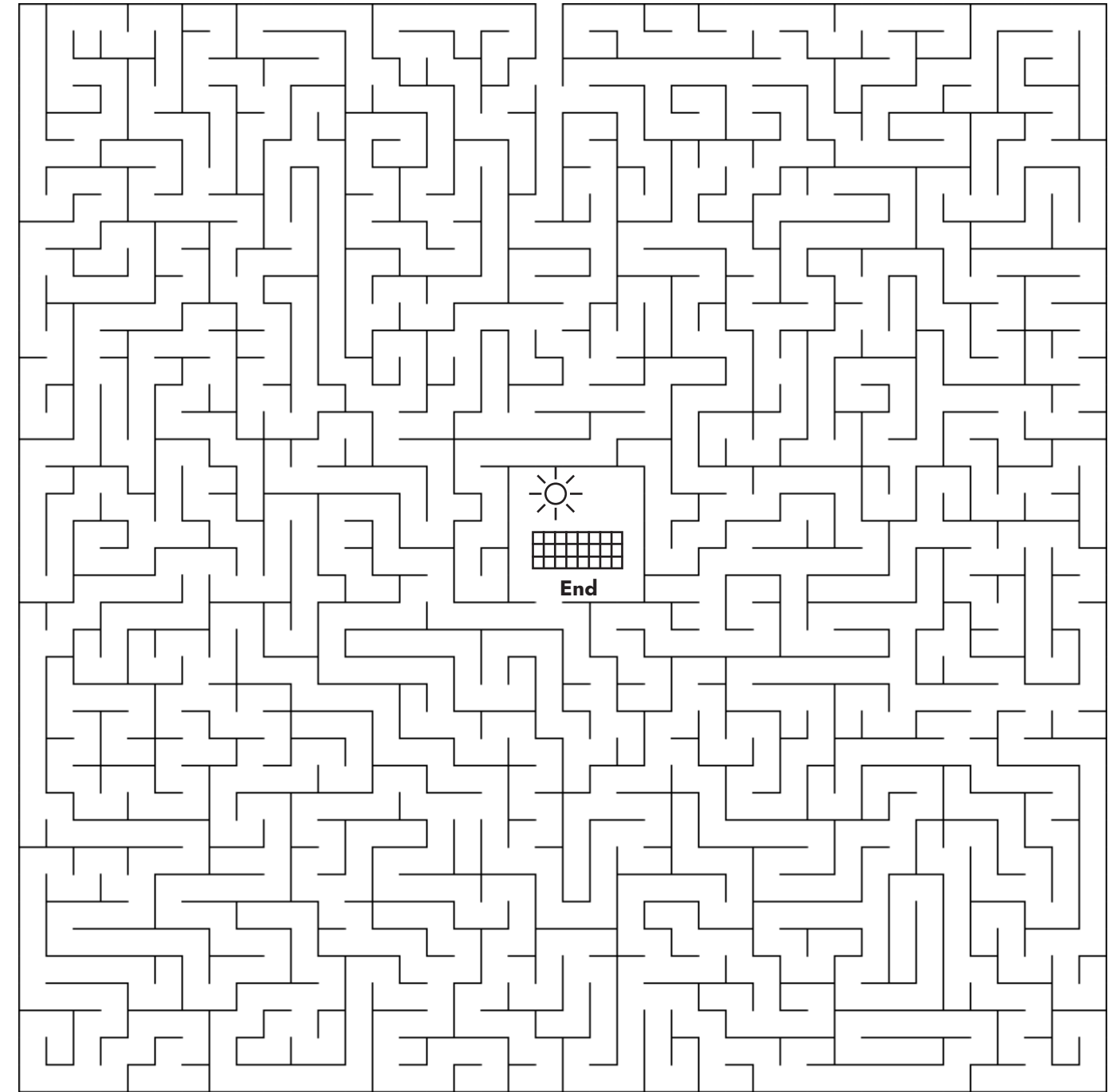
The Energy Adventures of Tommy and Remi



The Case of the Shiny Roof
Help Tommy and Remi find the solar panel.



Start





The Energy Adventures of Tommy and Remi

The Case of the Shiny Roof



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

Atoms
 Climate
 Energy
 Heat

Light
 Reginald
 Remi
 Roof

Tommy
 Shiny
 Sol
 Solar

Sun
 Wind



The Energy Adventures of Tommy and Remi

The Case of the Shiny Roof



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

Adventure
 Atoms
 Climate
 Colours
 Electricity
 Electrons

Energy
 Heat
 Light
 Nonrenewable
 Oven
 Photons

Radiation
 Reduce
 Reginald
 Remi
 Renewable

Roof
 Tommy
 Shiny
 Sol
 Solar panels

Sun
 Wind
 World



The Energy Adventures of Tommy and Remi

Can you find all 15 differences in the 2 pictures?



Can you find all 15 differences in the 2 pictures?



The Energy Adventures of Tommy and Remi



Can you find all of the objects in the campground?



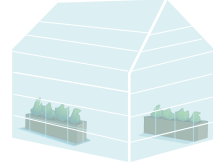
Clothes Line



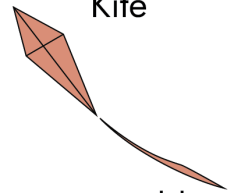
Fossil



Greenhouse



Kite



Nik



Pumpjack



Reginald



Remi



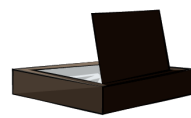
Sandwich



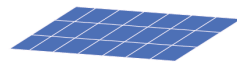
Sol



Solar Oven



Solar Panel



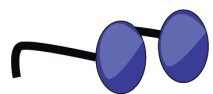
Sun



Sunflowers



Sun Glasses



Sun Dial



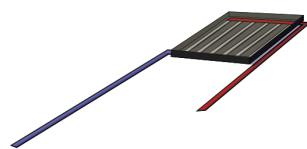
Sunscreen



Tommy



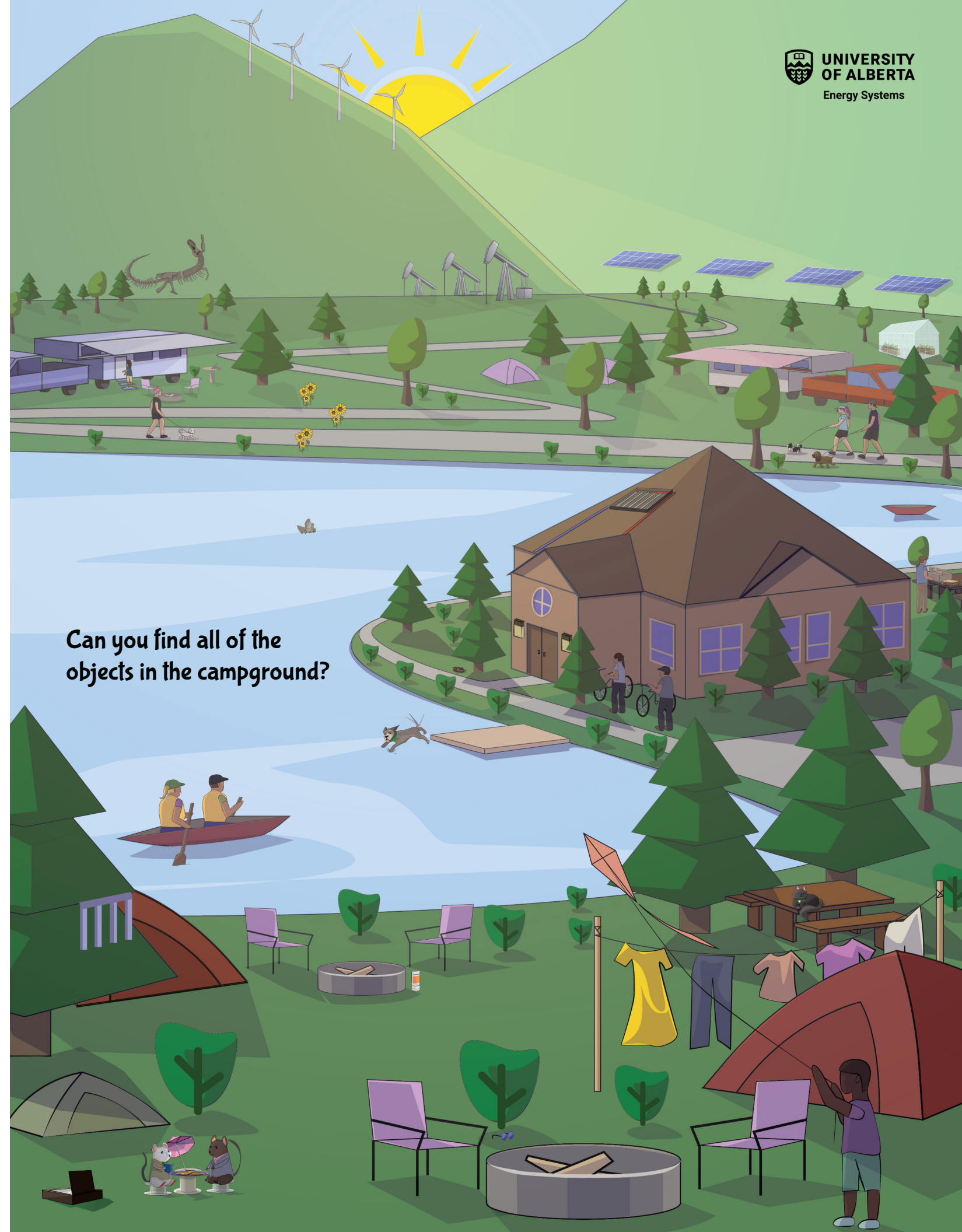
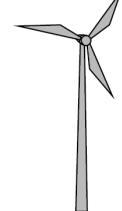
Water Heater



Wind Chimes



Wind Turbine



Can you find all of the objects in the campground?