

# World Around Us Level 2

## Student Worksheet

**Answer the following questions in 20 minutes.**

- Are the following statements true or false?
  - Plastic is cheaper and more durable than most other materials.
  - If someone has a broken bone, we should move it slowly.
  - Vomiting is a symptom of food-poisoning.
  - Food is a non-essential expense.

- Which of these items are biodegradable?



- If you throw away a plastic bag in a forest, what will you find in the same spot after 1 year, assuming it has not been moved? Explain.
- Circle the natural sources of light from the options below:



- List 1 item of each type – transparent, translucent, and opaque.
- List 2 ways to prevent the spread of COVID-19.
- If Mary borrows \$1000 from Adam at a 5% interest rate, how much should she pay him back after 1 year?

# Daily Routine

## My Emotions

Write how you feel **everyday** in your notebook. Think about why you feel a certain way.

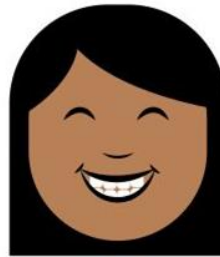
Today, I feel \_\_\_\_\_ because \_\_\_\_\_ 



excited



happy



joyful



calm



hurt



confused



nervous



lonely



frightened



annoyed



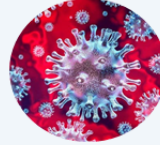
enraged

**Microorganisms** are living things that are too small to be seen with our eyes. Many of them make soil fertile and even help us digest food. Some are harmful to us and can cause diseases. Eg:



**Bacteria**

- Food Poisoning
- Tuberculosis
- Cholera



**Virus**

- Influenza (Flu)
- COVID-19
- Chicken Pox

How do you think these disease-causing microorganisms reach us? Below are some visual clues:



Health Poster  
Template

# FLU

**CAUSES**

Virus spread through

COUGH

SNEEZE

**SYMPTOMS**

SORE THROAT

COUGH

FEVER

CHILLS

WEAKNESS

PAIN IN MUSCLES

HEADACHE

RHINITIS

**PREVENTION**

EXERCISE

HEALTHY FOOD

FACE MASK

WASH HANDS

VACCINATE

When people with the flu cough, sneeze or talk, they send droplets with the virus into the air and potentially into the mouths or noses of people who are nearby.

## Make house rules that everyone must follow to keep COVID away.

Category	Rule	Observer	Violation Fine
Coming back from outside	Take off shoes at the entrance	Ayesha	Wipe the entire floor where violator stepped with proper detergent + Wash all the dishes for one full day.

*Categories can include: Going out, coming back from outside, and actions taken while in the house.*



## Day 2

Create a table to track how many glasses of water each person living with you drinks. Present it as a pictogram. (Example below)

Member	No. of Glasses per Day
Aliya	
Kaneez	
Rahil	

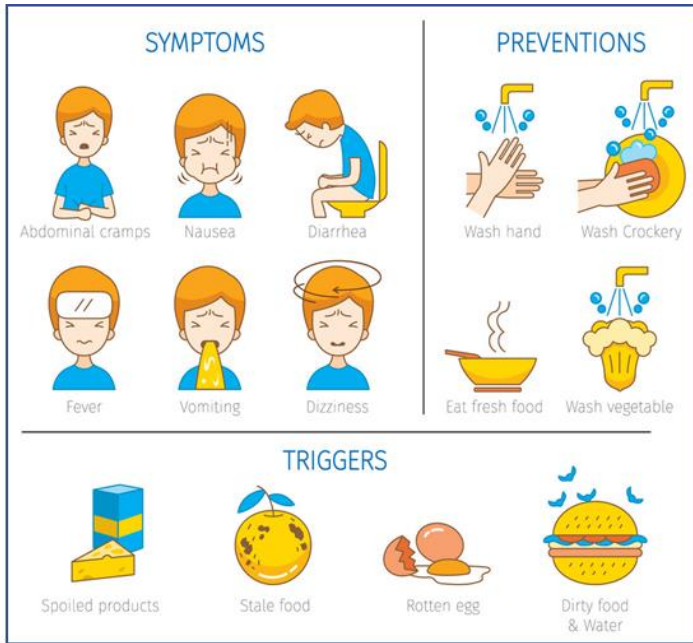
- Who drinks the least amount of water?
- Who drinks the most amount of water?
- What is the average no. of glasses people drink in your house per day?

$$\text{Average} = \frac{\text{Total No. of Glasses}}{\text{Total No. of People}}$$



Are people in your house drinking the recommended amount of water per day?

## Do you know any disease that can be spread through food?



- Observe the poster on 'Food Poisoning', a common disease caused by bacteria.
- Research or recall when you or someone else suffered from it.
- What are 3 things you can do to make yourself feel better when you have food poisoning?  
(Eg: drink more water)

Make your own 'healthy food' pyramid and draw your favourite food items in each category.



Observe the images below. For each, share two habits you can maintain a clean and healthy lifestyle.

**Why do you think some people do not do this already?**

**Example:**  
Brush your teeth daily.  
Wash your mouth after having food.



Oral Hygiene



Bathing Ritual



Hair Care



Foot Hygiene



Toileting Hygiene



Hand Hygiene



Coughing and Sneezing Hygiene



Home Hygiene

Using the table below, list and track 5 habits you want to build for better hygiene.

Add a ✓ or ✗ to track your progress

Habit	When will I do it?	Week 1	Week 2	Week 3	Week 4
Brush my teeth 2 times a day	Morning and Night	✓	✓	✗ <i>missed 2 days</i>	✓

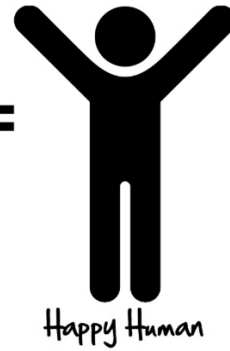
Look at the equation below and discuss:



+



=



## Day 5

# FIRST AID

If someone has a bad bleed...



Press on the bleed tightly, with cloth.

If someone is choking...



- Hit their back firmly up to 5 times.
- Check their mouth
- If the object doesn't come out, call an adult.

If someone has an allergic reaction...



- Keep away from the cause of the allergy.
- Make them sit and give them their medication.

If someone is unresponsive and breathing...



- Turn them on their side.
- Tip their head back.
- Call an adult.

If someone is having an asthma attack...



Make them sit and make them use their inhaler.

If someone has a broken bone...



- Do not move the broken bone.
- Call for an adult.

If someone has a burn...



Cool the burn under running water for 10 minutes.

If someone has a nose bleed...



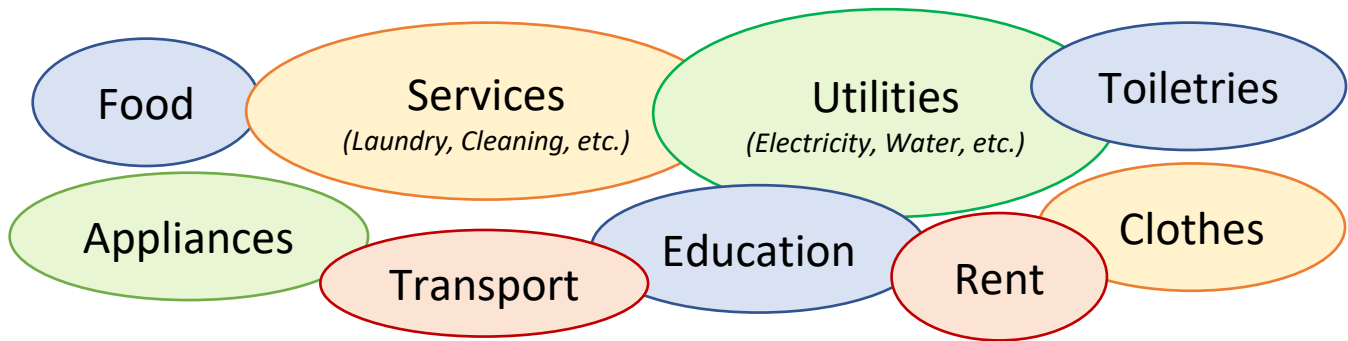
- Sit up straight
- Lean head forward
- Pinch the soft part of the nose for 10 minutes.

## Day 1

# Week 2

- **Expenses** refer to the money spent to buy the things we need.
- **Essential expenses** are a set amount spent on important things or our needs (Eg: rent, education, etc.).
- **Non-essential expenses** are the amount we spend on things we want and are not that important. (Eg: gifts, toys, etc.)

## Some expense categories



## Expense Table Template

Expense per month	Essential or Non-Essential?	Cost
Toiletries	Essential	QR 50

## Day 2

**Income** refers to how much money we earn.

- Money left after paying for everything you need:

**Savings** = Total Income – Total Expense

- Money owed to others:

**Debt** = Total Expense – Total Income



# BUDGET ADVICE

Help County Bank’s budget advisor, Mrs. Trusty, give financial advice to her customers by calculating their incomes and expenses below.



**1** Mrs. Tanya earns \$1000 each week and her husband earns \$750. Each week, they need to set aside \$200 for food, \$75 for gas, \$650 for the house rent, and \$350 for savings. How much money will they have left each week?

Total income: \_\_\_\_\_ Total expense: \_\_\_\_\_  
 Remaining amount: \_\_\_\_\_

- Do you think it's better for Mrs. Tanya to invest in a car or buy a shop - one generates income while the other is an expense.
- Which one do you think is better? Why?

**2** Moeen is going to school and working two part-time jobs. He works 20 hours for \$9.25 per hour at the grocery and 15 hours for \$11.50 per hour at Stellar Pizza Parlor. For all his hard work his mom gives him a monthly allowance of \$150. Moeen is responsible for his \$35 cell phone bill, \$50 gas bill, and \$200 car payment.



Total income: \_\_\_\_\_ Total expense: \_\_\_\_\_

Can he still save \$200 for college? \_\_\_\_\_

If so, does he have \$50 to hang out with friends? \_\_\_\_\_

Should Moeen try and save more money for college? If so, how? If not, why?

# 20-BEAN SALARY



## HOUSING + UTILITIES

Living with family, sharing costs of utilities	☺☺
Share an apartment with roommates	☺☺☺
Rent your own place	☺☺☺☺



## FOOD

Cook at home	☺☺
Buy from fast food joints.	☺☺☺
All meals away from home.	☺☺☺☺



## TRANSPORT

Walk or cycle	No Cost
Ride a bus or carpool	☺
Buy a used car + petrol	☺☺☺ ☺☺☺☺
Buy a new car + petrol	☺☺☺☺☺



## RECREATION

Parks, Visiting friends, Videos/ Music on phone	☺
Movie Theatres, Gym, Classes, Hobby groups	☺☺ ☺☺
Concerts, Sporting Events, Short Trips	☺☺☺
Long Vacations / Trips	



## GIFTS

Make your own	☺
Purchase gifts sometimes	☺☺
Purchase gifts frequently	☺☺☺



## FURNISHINGS / GADGETS

Second-Hand from Friends	No Cost
Buy used furniture	☺
Rent furniture	☺☺
Buy new furniture	☺☺☺

## EDUCATION

Free Public Schools	No Cost
Private School	☺☺☺
Additional Tuitions	☺☺



## COMMUNICATION

No Phone	No Cost
Phone + Limited data	☺☺
Phone + Unlimited data	☺☺☺ ☺☺
Wi-Fi at home	☺☺☺☺
Laptop	☺☺☺☺



## CLOTHES

Wear present wardrobe	No Cost
Shop at discount stores	☺
Shop for new clothes	☺☺
Shop for designer clothes	☺☺☺



## PERSONAL CARE

Basics: soap, shampoo, etc.	☺
Professional haircuts, branded products	☺☺
Regular visits to the salon	☺☺☺

## How Loans Work

People borrow money (**loan**) from the bank or people for their essential expenses.



**Borrowers**

\$ 100



\$ 110



While returning the amount, they pay an additional fee called 'Interest'.



We earn interest!

Banks or people who give the money (Lenders) earn the Interest.

## How Banks Work

1. People deposit money into a bank.



We earn interest too!

**Depositors**

\$ 100



\$ 102



Bank gives \$2 to the depositor.



Bank keeps \$8

2. Borrowers take a loan from the bank.

\$ 100



\$ 110



\$10 interest paid to the bank while returning the loan.



## Simple Interest

**Principal (P):** Amount of money deposited or borrowed

**Rate of Interest (r):** Percentage of the principal amount earned.

**Time (t):** For how long (in years) you borrow or invest

While taking a loan from a bank or depositing money into it, they tell us the rate of interest.

How to calculate simple interest



We earn or pay the interest on the principal amount based on the rates fixed by the bank.

This is called **Simple Interest**.

$$\begin{aligned} \text{Simple Interest} &= P \times r \times t \\ &= \$100 \times \frac{6}{100} \times 1 \\ &= \$6 \end{aligned}$$

$$\begin{aligned} \text{Total Amount} &= \text{Principal} + \text{Interest} \\ &= \$100 + \$6 \\ &= \$106 \end{aligned}$$

## Solve the following:

- Find the simple interest and total amount to be paid for these loans:
  - $P = \$1800$      $R = 5\%$      $T = 1$  year
  - $P = \$2600$      $R = 12\%$      $T = 3$  years
  - $P = \$180$      $R = 3\%$      $T = 1\frac{1}{4}$  year
- A bank is offering 3.5% simple interest on a savings account. If you deposit \$7,500, how much interest will you earn in two years?
- Imagine that you take out a loan for \$6000 to start a business after high school. The bank charges you 8% interest for the loan. After 5 years how much interest will be added on to your loan?

## Day 5

## WORD PROBLEMS



- Use simple interest to find the ending balance.
  - \$34,100 at 4% for 3 years
  - \$7,400 at 10.5% for 1 4 years
- Pat borrowed \$2800 from her friend, Mark at a 5% interest rate per year. She plans to save the amount of the interest each year. How much should she save in:
  - 1 year
  - 2 years
  - 3 years
  - 4 years
 What is the total amount she needs to pay Mark after 4 years?

- Describe and correct the error in finding the balance of the simple interest account after two years.



Principal: \$700    Rate: 3% per year

t	Principal	Annual Interest	Balance at End of Year
1	\$700.00	\$21.00	\$721.00
2	\$721.00	\$21.63	\$742.63

- In simple interest, a sum of money amounts to \$ 6200 in 2 years and \$ 7400 in 3 years. Find the principal.
- Morgan has \$130,000 dollars in his bank account after 20 years. If he originally deposited \$50,000 in the bank, what must the interest rate have been?
- Scott takes gets a student loan to go to college after high school. If he pays \$750 in interest at a rate of 3%, how much must the loan have been for originally?

## Day 1

## Week 3



### Natural Sources of Light

The universe is filled with objects that emit light. Some light from these sources reaches the earth. (Eg: Sun, stars, etc.)

### Artificial Sources of light

We can produce light artificially too – by heating objects or through electricity. (Eg: Torch, candle, etc.)

## Day 2

### Identify 4 materials of each type:



Transparent

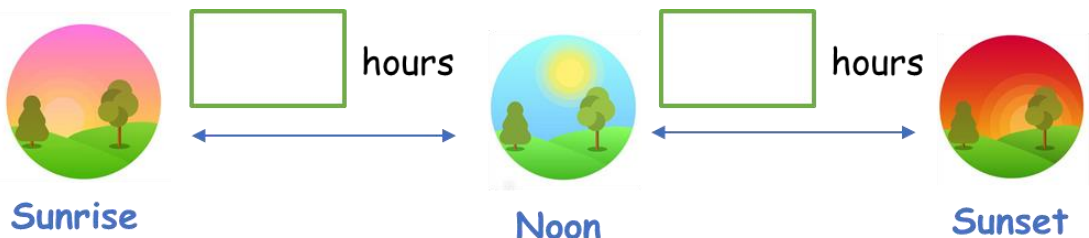


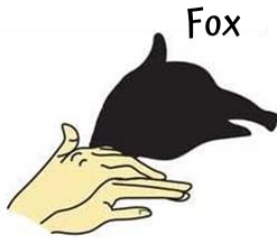
Translucent



Opaque

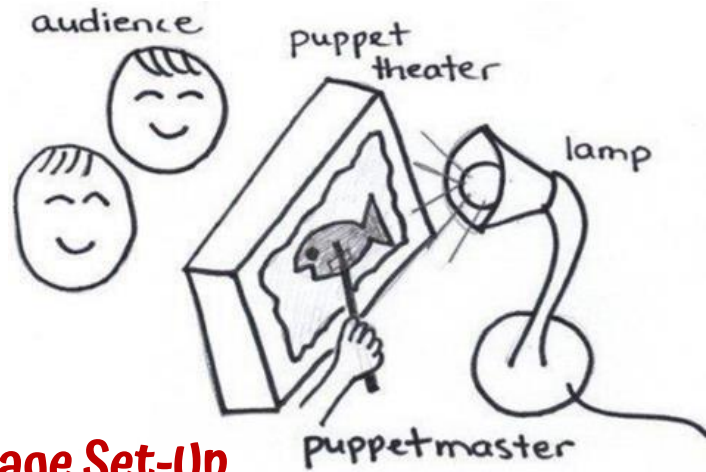
Calculate:





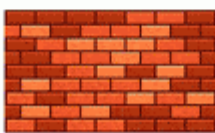
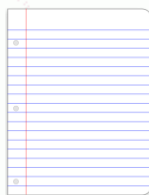
## Day 4

### Making the Characters



### Stage Set-Up

Draw a box around opaque objects, a circle around translucent objects and underline transparent objects.



Identify whether each of the following is natural or artificial light.  
Draw another natural and artificial source of light not given below.



Artificial

Natural

## Day 5 LIGHTS IN WATER

Written By Shreya Yadav



Maisha goes to the beach. She visits Flyman. Flyman is a flying fish. "Do you want to come meet my friends?" asks Flyman.

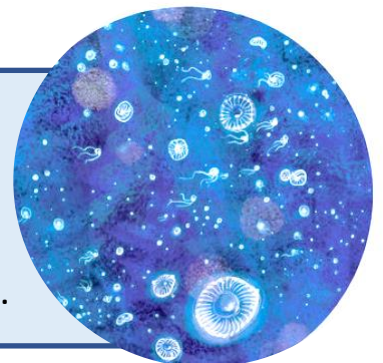
"Why not!" said Maisha, "But how will we see? It is dark in the night".

Then, Flyman sees a light in the water. It glows and fades and glows again.

Flyman shouts: "I have an idea! Get on my back.." They swim to the lights. Maisha takes a breath. They go under the water. Maisha gasps. Tiny animals glow in the sea. It is like a sky of stars. Who are these tiny animals?

"These planktons can help us see," says Flyman.

**Plankton** are plants that glow when there is movement in the water. This helps to scare away predators that might eat the plankton. Sometimes the movement of boats can cause these sparks too.



Maisha hears a deep voice. It is a Firefly Squid. The squid has blue spots of light. "I can help, too," says the squid. They all swim down. Down, down, where it is very dark. But the plankton and the squid give light.



The **firefly squid** has special organs called photophores. The photophores make light to scare away the squid's predators or attract food.



They meet an Anglerfish. This fish has sharp teeth! But Maisha feels brave. "I can help you see too. I have a bulb of my own!" said the Anglerfish.

Anglerfish make their light from the glowing bacteria inside them. When a plant or animal makes light, that is called **bioluminescence**.

"It was wonderful meeting all of you," said Maisha.

"See! you do not have to worry about light in the sea", exclaimed Flyman.

Flyman and Maisha wave goodbye to the fish and swim back to the beach.

Maisha sees the moon and stars in the sky. Now she knows there is also light in the water too!

## Day 1 Week 4

**Plastic** is a man-made material, made using certain types of chemicals, that can change its shape easily when soft.






## Make your own Home Plastic Diary:

**1** Identify the 5 most commonly used plastic items, by exploring your home, discussing with family members, etc.

**2** Mark tallies depending on how many of each plastic item were used each day of the week.

Item	No. of uses /day	Single Use	Total Usage in a Week	Suggested alternative
 Plastic Bag	Monday:      = 4 Tuesday: Wednesday: Thursday: Friday: Saturday: Sunday:	✕	My guess: 15  Family: 10  Actual: 7	

**3** Is it discarded after one use? If yes, it is a 'Single Use' item. Tick (✓) or cross (✕) accordingly.

**4** Guess how many times the item is used in a week. Interview family members to discuss and make the same guess.

## Observe the infographic (continued on the next page)

# 2050

is the year experts think the amount of plastic in the ocean will weigh more than the amount of fish



Imagine what this would look like.

- How will it impact our lives?
- Why do you think plastic gets dumped in the oceans?

- Why do you think people use plastic bottles?
- What can be used instead?



# 1 MILLION

plastic bottles are bought around the world every minute

Plastics can now be found on every beach in the world



## LAND & SEA



Plastics have been consumed by land based animals, as well as marine life



Over the last 10 years we have made more plastic than during the last...

# 100 YEARS

How do you think plastic reaches the food of animals?

- Give 3 examples of single-use plastics.
- How can we avoid using it?

## 500 - 1,000

years is how long it could take for some plastics to break down



Not ALL plastics are recyclable

Single-use plastics make up 40% of the plastic made every year



## Day 2 Types of Materials

Our environment has micro-organisms such as bacteria that break down substances which go back into the soil. However, not all materials undergo this process.



PAPER



VEGETABLES



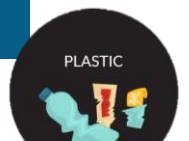
KITCHEN WASTE

### BIODEGRADABLE

Materials that can be broken down naturally in the environment.

### NON BIODEGRADABLE

Materials that cannot be broken down naturally in the environment.



PLASTIC



METAL



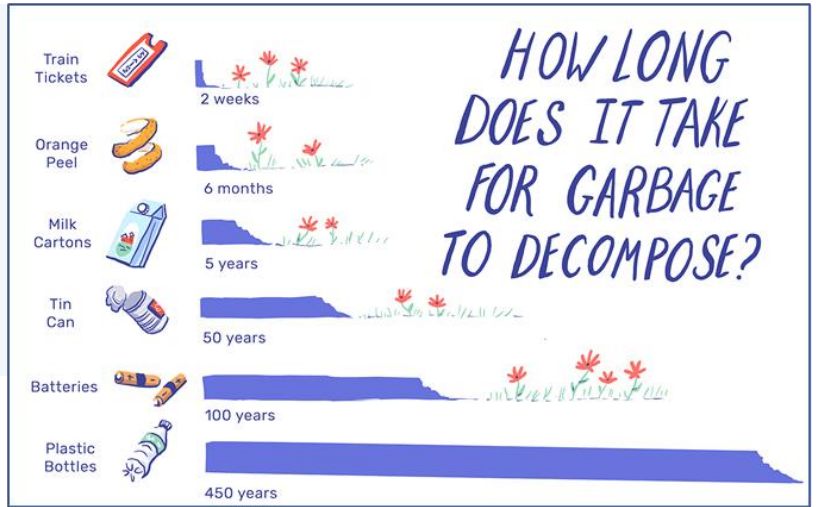
BATTERIES

Observe what your family throws into the trash can for a day. Segregate the wastes as biodegradable and non-biodegradable.

Circle the items that are non-biodegradable.



Make a similar graph to show how long an item will take to decompose, for any 6 items that you threw today.



## Day 3

Draw the things in your Home Plastic Diary, that you use in the present and what people used instead in the past, based on the interviews.

PAST		PRESENT	
Eg:  Cloth Bag	→	 Plastic Bag	
	→		
	→		

# MARINE VOICE



Imagine you are an animal living in the ocean.

Write a speech, addressed to human beings, expressing how much damage they are causing to the oceans and your lives. Use the template below.

Hello, world!

I hope all of you are enjoying your morning. We, however, do not get to enjoy ours. The plastic you use kills millions of us every year.

It \_\_\_\_\_  
and \_\_\_\_\_.

My question for you is this: \_\_\_\_\_?

I feel that \_\_\_\_\_.

We all share our planet Earth and we all deserve to live. So, I urge you to think about \_\_\_\_\_.

There is still hope. Let us discuss some actions we can take towards this.

First, \_\_\_\_\_.

Next, \_\_\_\_\_.

Lastly, \_\_\_\_\_.

Let us hope for a brighter future for my friends in the ocean and for you.

Thank you!

**Recycling** is the process of taking materials ready to be thrown away and converting (changing) them into reusable materials. (Eg: Used plastic bottles can be broken down in factories to make new plastic bottles.)



## REDUCE

Which plastic items can you use less?

## RECYCLE

Which plastic items can you recycle?  
Are there Recycling Bins in your area?



From your Home  
Plastic Diary...



## REUSE

Which plastic items can you use again?

## REPLACE

Which plastic items can be replaced with something biodegradable?



# LET'S UPCYCLE!

To **recycle** something means to completely break something down and make something new out of it. To **upcycle** means to use old things creatively and make something new out of them without changing its state too much.



Waste plastic bottles

RECYCLE



Road made using plastic

UPCYCLE



Toy cars from plastic bottles.