

# GLASS AND PLASTIC

## GLASS

Glass is made using heated sand. Sand melts when it is heated to a high enough temperature (an incredible  $1,700^{\circ}\text{C}$ ) in a furnace. Rollers are used to flatten this hot liquid into sheets which are left to cool into glass. The sheets of glass can then be cut into the shapes and sizes to make windowpanes, mirrors, table tops and more. Sheets of glass can also be re-melted to make more complicated objects such as glasses, vases, bowls, bottles and lampshades. Skilled **glassblowers** use long metal blowpipes to blow and shape globs of soft, liquid glass into delicate and intricate objects.



Glassblowing

## PLASTIC

Plastic is made from chemicals found in oil, natural gas or coal. When these chemicals are heated, they break down into molecules that can be moulded into different plastic products. There are about 50 different types of plastic but some of the most popular are Bakelite, nylon and Styrofoam.

**Bakelite** was invented in 1907 by Leo Baekeland and was used for making telephones, records, radios and even furniture. **Nylon**, invented in 1935, is used to make tights, toothbrushes, parachutes and carpets. **Styrofoam**, invented in 1941, contains tiny bubbles of air and so can float. It is used to make boats, packaging, disposable cups and plates, and to insulate homes.

Plastics are widely over-used. Plastic waste is polluting our seas and our land. To protect our environment, it is vitally important that we recycle as much plastic as we can and find alternatives to any plastics that cannot be recycled. ■



Bakelite telephone



Reusable plastic water bottle

## QUICK QUESTIONS

- 1 What is glass made of?
- 2 How is glass moulded into different shapes?
- 3 What is plastic made of?
- 4 Name (a) three types of plastic and (b) one product of each.
- 5 Why must we reduce the amount of plastic we use?

Thursday

# Festival Tickets

Congratulations, you are now the proud owner of a ticket for the Drumbeg Sonic Digger Festival. Here are some tips to make your festival experience as enjoyable as possible:

- Overnight camping is permitted only in the grounds of Drumbeg Castle. Tents erected in other fields around the venue will be removed.
- Entry to the festival will be limited to ticket holders. Anyone arriving without a ticket will be refused admission.
- Please ensure that the barcode on your ticket is visible to our security staff at each entrance.
- There will be a wide range of meals and snacks on sale at the venue. Festival-goers are not permitted to bring food, glass bottles or sharp items into the festival grounds.
- Festival-goers are advised to travel by public transport. Car parking at Drumbeg Castle is limited to those who reserve a parking space in advance.
- This is an outdoor festival, so come prepared for all weather.
- There are four entrances to the festival. Please go to the entrance gate number marked on your ticket and follow the directions of our security staff.
- All bags will be subject to inspection at each of the entrances. This may cause delays, so please be patient.
- The Drumbeg Sonic Digger Festival is an environmentally-friendly event. Please ensure that you use the appropriate recycling facilities at the venue or bring your litter home with you. ■



## QUICK QUESTIONS

1. Where is the festival being held?
2. What items are festival-goers not permitted to bring into the venue?
3. What will be subject to security inspections at each entrance?
4. How many entrances are there to the festival grounds?
5. What might festival-goers bring with them to come prepared for all weather?



# TSUNAMIS

Here's a strange word that I heard recently: 'tsunami'. What is that?

'Tsunami' is a Japanese word meaning 'harbour wave'. A tsunami is a series of enormous ocean waves that crash onto land causing widespread destruction and endangering lives.

**What causes a tsunami?**

A tsunami is usually caused by a large undersea earthquake, landslide or volcanic eruption.

**Where do tsunamis occur?**

The vast majority of the world's volcanic eruptions and earthquakes occur in a geologically active area of the Pacific Ocean called the Ring of Fire. Almost all tsunamis begin here, racing across the ocean at speeds of up to 800km per hour.

**What happens when a tsunami reaches land?**

In the deepest parts of the ocean, tsunami waves may appear only 30cm or so high. But as they approach land and enter shallower water, they slow down and begin to grow in energy and height.

A tsunami's trough (the lowest point of the wave) often reaches the beach first. When it does, it produces a vacuum that sucks coastal water back out to sea and leaves the bottom of the harbour or sea floor exposed. Fast-retreating coastal water is an important warning sign that a tsunami is approaching. Usually the huge

waves hit the shore about five minutes later. A tsunami is usually made up of a series of waves, called a wave train. As more and more of these waves pound the shoreline, the destruction is multiplied.

**Could a tsunami happen in Ireland?**

Scientists and engineers who study **seismology** (the study of earthquakes) say that small earthquakes happen here from time to time but the risk of a tsunami is very low. ■

## QUICK QUESTIONS

- 1 Where does the word 'tsunami' come from?
- 2 Where do most tsunamis begin?
- 3 How fast do the tsunami waves race across the ocean?
- 4 What is a wave train?
- 5 Is the risk of a tsunami happening in Ireland high or low?

