

# PLASTIC POLLUTION BACKGROUND AND OVERVIEW

# WHAT IS MARINE DEBRIS?



# PLASTIC PRODUCTION

- PLASTIC WAS FIRST PRODUCED COMMERCIALY IN THE EARLY 1950s
- SINCE THEN, PLASTIC PRODUCTION HAS GROWN
- NOW, WE PRODUCE MORE THAN 380 MILLION TONNES EACH YEAR





NATURAL RUBBER DISCOVERED

1839



'BAKELITE' THE FIRST COMMERCIALY USED PLASTIC INVENTED

1907



PET, PE, PP, ACRYLIC AND STYROFOAM INVENTED

1935-54



FIRST 'GARBAGE PATCH' DISCOVERED

1997



SCIENTIFIC LITERATURE ON MICROPLASTIC IN THE OCEAN GROWS

2010s



1840-62

POLYSTYRENE AND PARKENSINE DISCOVERED



1926

PLASTICISED PVC DISCOVERED



1960

PLASTIC WASTE FIRST OBSERVED IN OCEAN



2004

TERM 'MICROPLASTIC' FIRST COINED



CURRENTLY

ACTIONS TO MITIGATE PLASTICS ADVANCE



# PLASTIC TIMELINE

# WHY DID PLASTIC BECOME SO POPULAR?

## ADVANTAGES

CHEAP  
LIGHTWEIGHT  
STRONG  
EASY TO CREATE  
VERSATILE  
LONG LASTING  
SANITARY



### Throwaway Living

#### DISPOSABLE ITEMS CUT DOWN HOUSEHOLD CHORES

The objects flying through the air in this picture would take 40 hours to clean—except that no housewife need bother. They are all meant to be thrown away after use. Many are new; others, such as paper plates and towels, have been around a long time but are now being made more attractive.

At the bottom of the picture, to the left of a New York City Department of Sanitation trash can, are some throwaway vases and flowers, popcorn that pops in its own pan. Moving clockwise around the photograph come assorted frozen food containers,

a checkered paper napkin, a disposable diaper (seriously suggested as one reason for a rise in the U.S. birth rate) and, behind it, a baby's bib. At top are throwaway water wings, foil pans, paper tablecloths, guest towels and a sectional plate. At right is an all-purpose bucket and, scattered throughout the picture, paper cups for beer and highballs. In the basket are throwaway draperies, ash trays, garbage bags, hot pads, mats and a feeding dish for dogs. At the base of the basket are two items for hunters to throw away: disposable goose and duck decoys.

CONTINUED

1955

LIFE MAGAZINE  
ADVERTISEMENT

# PLASTIC COMMERCIALS

SARAN  
WRAP 1953



TUPPERWARE  
1960S

PEPSI-COLA  
1978



AMERICAN  
PLASTICS  
COUNCIL 1997

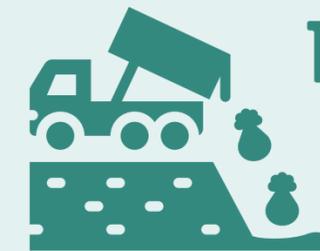


PLASTIC USES

# PLASTIC ENTERING THE MARINE ENVIRONMENT



**8 MILLION TONNES**  
OF PLASTIC ENTERS THE MARINE  
ENVIRONMENT EVERY YEAR



**1 RUBBISH TRUCK**  
WORTH EACH  
MINUTE

# PLASTIC IN THE OCEAN

The image is a YouTube video thumbnail. At the top left, the 'INSIDER Science' logo is visible. The main title 'GIANT TRASH ISLAND' is written in large, bold, white letters on a dark blue background. Below the title, a large, brown, jagged island of trash is shown floating in the ocean. To the right of the trash island, three identical, smaller versions of the Statue of Liberty are shown on a platform, illustrating the scale of the trash island. A red YouTube play button is centered over the trash island. In the top right corner, there is a 'Share' button with a white arrow icon. At the bottom left, the text 'Watch on YouTube' is displayed next to the YouTube logo. The word 'SCIENCE' is written in large, white, spaced-out letters at the bottom left, and 'INSIDER' is written in large, white, spaced-out letters at the bottom right.

INSIDER Science

How Big The Great Pacific Garbage Patch Really Is

Share

GIANT TRASH ISLAND

SCIENCE INSIDER

Watch on YouTube

# SOURCES OF MARINE PLASTIC POLLUTION



**MISMANAGED  
PLASTIC WASTE  
(LITTER)**

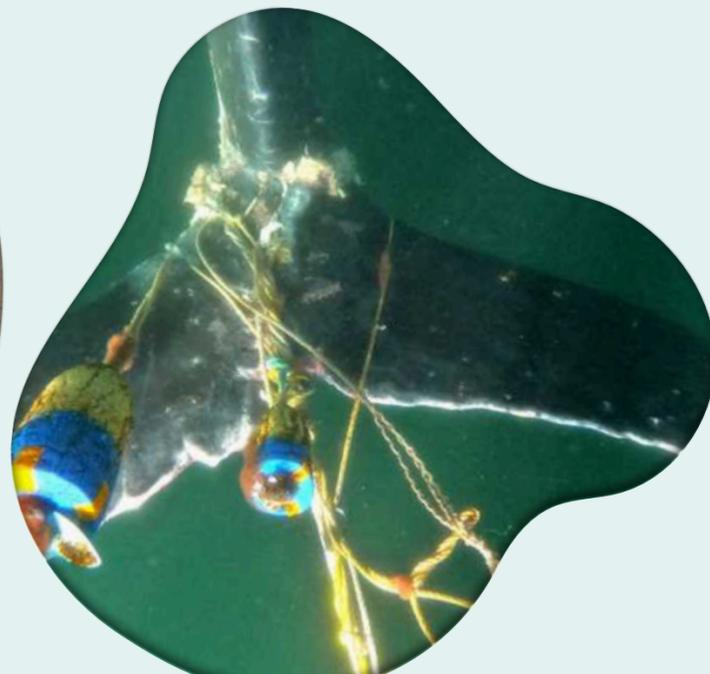


**SEA-BASED PLASTIC  
DEBRIS**



**MICROPLASTICS**

# PLASTICS AND MARINE LIFE



# PLASTIC POLLUTION IN AUSTRALIA



ALL THIS PLASTIC  
WAS FOUND ON  
AUSTRALIAN  
BEACHES



# NORTHEAST ARNHEM LAND



MARINE DEBRIS ON THE COAST



# RECYCLING

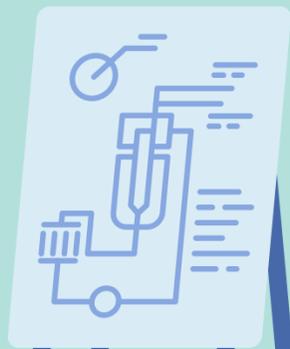


REDUCE  
REUSE  
RECYCLE

# ALTERNATIVES



# RESEARCH



# SOLUTIONS

# EDUCATION



# DISCUSSION POINTS

**WHAT BEACHES IN THE AREA HAVE YOU SEEN PLASTIC?**

**HAS ANYONE EVER HELPED OR WANTS TO HELP WITH A BEACH CLEAN?**

# **PRACTICAL**

**COMPLETE THE WORKSHEET ABOUT  
PLASTIC POLLUTION**