

# Safe at sea

Educational resource for  
Key Stage 1 provided by:



Trinity House

All about lighthouses, lightvessels and buoys

## Teachers' notes



# Safe at sea

*Safe at Sea* provides a range of educational resources designed to inspire you, as a teacher, and to enable KS1 pupils to begin to think about and understand the work of Trinity House. Some of the resources are on our website: [www.trinityhouse.co.uk/safeatsea](http://www.trinityhouse.co.uk/safeatsea); others are in the *Safe at Sea* KS1 printed pack.

**We have created three new, loveable characters:**

*Sammy the seal*, *Sarah the seagull* and *Dan the dog* to help deliver key learning objectives. Topics covered include: the function of lighthouses, buoys and lightvessels; floating and sinking; light and dark and coastal habitats.



## Online

There are several different kinds of flexible resources on the website, each designed to be an integral part of a whole lesson or series of lessons.

- ➔ Worksheets
- ➔ A weather chart
- ➔ Interactive games
- ➔ Four video stories
- ➔ Teachers' Guide

## Printed pack

The pack contains a number of resources, linked to the New Primary Curriculum, that can be used in conjunction with the online elements, or on their own.

- ➔ An A1 poster ...
- ➔ Teachers' Notes
- ➔ Two packs of flash cards –  
one with numbers and one with pictures
- ➔ The folder itself ...
- ➔ A sheet of 35 attractive  
stickers

The following pages give more details of each of the resources. There are suggestions for follow-up and extension activities, many of which are cross-curricular. The *Safe at Sea* website also provides links to other online resources should you wish to explore topics further.

Above all, we hope you have fun with these resources and that you and your pupils are encouraged to find out more!

# Worksheets

These are on the website: [www.trinityhouse.co.uk/safeatsea](http://www.trinityhouse.co.uk/safeatsea) and are downloadable resources. They are PDFs and have been designed to be printed and copied. Each worksheet has a space at the top for children to write their name and the date.

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## Literacy: Sentence matching

The worksheet introduces children to the concepts of lighthouses, buoys and lightvessels. The activity requires pupils to match six sentences to six pictures to provide the correct information. Sentences could be cut out and glued next to the relevant picture, or copied by hand. The illustrations are line drawings that the children can colour in.



SPECIFIC CURRICULUM LINKS: ENGLISH 2 (READING - UNDERSTANDING AND INTERPRETING TEXTS) 1A, 1E, 1J, 1K, 1L, 2A.

## Suggested extension or follow-up activities:



- Discover the location of lighthouses in the UK and mark them on a map
  - Find out about flash patterns and use a torch and timer to re-create them to send messages
  - Investigate how lighthouses are constructed and build a model
  - Explore the shape and stripe patterns of lighthouses
  - Use the internet to locate images of lighthouses. Use paint or photo software to manipulate the images to create a piece of art.
- .....

## Literacy: Matching captions

The worksheet has four illustrations and three captions that tell part of a story. Sammy the seal is worried that ships might be in danger because it is so stormy. He wants to know how they can return to harbour.

The activity requires children either to cut and stick, or copy the three captions beneath the relevant illustration. Children should then decide how they want the story to end and create their own fourth caption under the final illustration, which is of a lighthouse with its beam. An example of an appropriate caption would be: "The light from the lighthouse shows ships where the coast is".

The worksheet has a second page that is lined, on which children can write out the story in full.



SPECIFIC CURRICULUM LINKS: ENGLISH 3 (WRITING - ENGAGING WITH AND RESPONDING TO TEXTS) 1A, 1B, 1C, 1D, 2B.



## Suggested extension or follow-up activities:

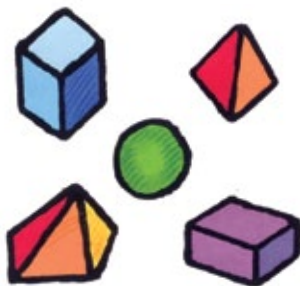
- Pupils develop their ideas and expand on the story and the characters as they write out the story in full
- The story is used as a basis for drama, re-enacting the story and/or hot-seating characters
- Pupils investigate how storms are depicted in art.

## Numeracy: Shape recognition

The worksheet features a picture of a lighthouse in a seaside setting that contains 2D shapes in dotted lines. The 2D shapes are squares, rectangles, circles and triangles. The pupils should draw over the dotted lines of the 2D shapes and then colour them in different colours to show recognition. Below the main picture are some 3D shapes which should be coloured in, again showing recognition. The 3D shapes are: a square cuboid; a rectangular cuboid; a pyramid and a sphere.



SPECIFIC CURRICULUM LINKS: MATHS 3 (SHAPE, SPACE AND MEASURES) 2A, 2B.



## Suggested extension or follow-up activities:

- Cut out the shapes and use them to experiment with reflective symmetry
- Find images of lighthouses online and explore the different shapes
- Use the worksheet to hunt for and name the same shapes in the classroom or around school
- Draw other lighthouses, introducing and identifying shapes.

## Numeracy: Number sequence

This worksheet tells a story in pictures of a ship trying to return to the safety of harbour by navigating from buoy to buoy. Children must fill in the missing numbers on the buoys to show recognition of the number sequence. Odd numbers are then coloured in red and even numbers in green.



SPECIFIC CURRICULUM LINKS: MATHS 2 (NUMBERS - COUNTING, PARTITIONING AND CALCULATING) 2A, 2B, 2C





## Suggested extension or follow-up activities:

- Extend the number line by counting on
- Circle the multiples of 2, 5 and 10 in different colours
- Choose two numbers to make a number bond of 10.

## Science: Floating and sinking

This is a 'cut out and stick' activity where the pupils have to predict which objects will float and which will sink. The worksheet is divided into two pages. Page 1 has the instructions and the pictures for cutting out. These comprise a wooden fishing boat; a metal lobster pot; a buoy filled with air; a buoy weight; a swimmer wearing a life-jacket; a treasure chest; a body-board; a cork; a weight; a barrel and a lifebelt. All these pictures are within a frame to facilitate cutting out. Page 2 has a picture of the water and skyline, with the word "float" above the water-line and the word "sink" below.



SPECIFIC CURRICULUM LINKS: SCIENCE 3 (MATERIALS AND THEIR PROPERTIES) 1A, 1B, 1C



## Suggested extension or follow-up activities:

- Conduct an experiment using the named materials to see which float and which sink
- Investigate the properties of different materials and their suitability for the objects - wood for boats; metal for weights etc
- Create a buoyancy object - a boat or life belt, for example
- Write a message and seal it in a bottle with a cork lid
- Explore the history of life jackets.

## Geography: Matching habitats

The sheet has two lists of six items side by side. The first is a list of animals and plants that live near lighthouses; the second list is of the specific habitats in which those animals or plants live. Children should draw a line to link the animal or plant with the correct habitat. To assist them there are a series of vignettes at the top of the page showing: a crab in a rockpool; a dolphin in the sea; a seal on a rock; seaweed (bladderwrack) on the beach; a puffin by a sandy burrow and a seagull on a cliff.



SPECIFIC CURRICULUM LINKS: GEOGRAPHY (KNOWLEDGE AND UNDERSTANDING OF PLACES) 1A, 3A, 3B, 3D



## Suggested extension or follow-up activities:

- Choose one animal and describe its habitat. Imagine what it is like to live there
- Choose one animal or plant and investigate its life-cycle
- Explore how litter and pollution can damage these environments and affect the flora and fauna that live there.

# Weather chart

This is primarily designed as a class resource, but can be used as an individual resource. The first page is a weather recognition chart, designed to be printed and laminated. It can then be used to log a daily record of the local weather. The second page contains the weather icons which can be printed in colour on card and then attached to the chart. Alternatively, board pens can be used to write the weather for the day on the chart. It can later be wiped clean. Either way, the chart is a reusable resource.

SPECIFIC CURRICULUM LINKS: SCIENCE 1 (SCIENTIFIC ENQUIRY) 2B, 2F, 2G; GEOGRAPHY 1B, 2B, 3A, 4A



## Suggested extension or follow-up activities:

- Produce a written summary of the weather for the week using the information that has been recorded on the chart
- Record the weather over a whole term then transfer the information to a data sheet using ICT
- Log on to the local weather forecast and see if the weather matches the forecasters' predictions.

# Games/Online interactive

## Literacy: Story maker

Pupils are given a choice of character, setting and events relating to *Safe at Sea* to create their own narrative. On completion, they have a choice: either to print their completed story or create another one.



SPECIFIC CURRICULUM LINKS: ENGLISH 3 (WRITING) 1B, 1D, 2B, 2C; ICT 2A, 2B, 2D, 3A



## Suggested extension or follow-up activities:

- Review and revise completed stories, produce a second draft - either handwritten or typed
- Use the story as a starting point for drama
- Use the story as a discussion point for PSHE topics such as friendship.

## Numeracy: Number balance

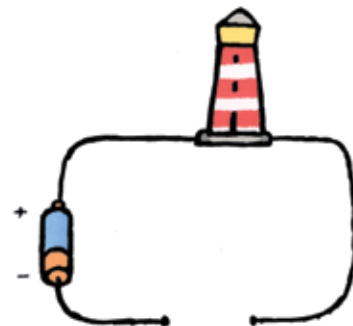
The activity involves dragging and dropping two numbered barrels on to either side of a seesaw to make it balance. Balance can only be achieved if the two barrels used on each side have the same total value. This activity supports learning about the properties of numbers and number bonds.



SPECIFIC CURRICULUM LINKS: MATHS 2 (NUMBERS) 3A, 3C, 4A, ICT 2D, 4B

## Science: Electrical Circuit

On screen is a simple circuit with a lighthouse and a battery connected by a wire. There is a gap in the wire. Children are offered a choice of items to drag and drop into the gap to complete the electrical circuit and light up the lamp at the top of the lighthouse. The conductors are the aluminium can, the piece of wire and the gold coin, which will all light up the lamp. The insulators are the cork, the barrel and the lifebelt.



SPECIFIC CURRICULUM LINKS: SCIENCE 4 (PHYSICAL PROCESSES) 1B, 1C, ICT 2C, 2D

## Suggested extension or follow-up activities:

- Construct a circuit using a real battery and light bulb.



# Video stories

Each of the four stories features real-life narration interspersed with original illustrations telling the adventures of Sammy the seal, Sarah the seagull, Dan the dog and friends.

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## Story 1: Sammy and the shipwreck

### Synopsis

Sammy the seal learns what a lighthouse is for by swimming out to Wreckers' Rock, where he spots a shipwreck and treasure beneath the sea. Sammy is chased by a stingray, but swims to the safety of the harbour, where Dan the dog tells the story of the wrecked ship, the Mary Jane.



SPECIFIC CURRICULUM LINKS: SCIENCE 2 (LIFE PROCESSES AND LIVING THINGS) 1B, 2G, 4B; SCIENCE 3 (MATERIALS AND THEIR PROPERTIES) 1B, 1C, 2B; GEOGRAPHY 3B, 4A; CITIZENSHIP 1A, 1B, 2A, 2I, 3G



### Suggested extension or follow-up activities:

- Research the history of pirates, wreckers, coins (money) and cannons
  - Investigate the location and nature of harbours
  - Discuss personal safety and feeling afraid
  - Identify the location of UK lighthouses - where is the nearest lighthouse to your school?
  - Use Google Earth to examine aerial views.
- .....

## Story 2: Sarah saves the day

### Synopsis

Sarah the seagull's friendship with Sammy is put to the test when Sarah drops pebbles on Sammy's head. Sammy swims out to sea and discovers the bulb on the lightvessel is faulty. Sarah flies out and changes the bulb, and through teamwork their friendship is renewed.



SPECIFIC CURRICULUM LINKS: SCIENCE 4 (PHYSICAL PROCESSES) 1A; CITIZENSHIP 2F





## Suggested extension or follow-up activities:

- Investigate how light bulbs work
- Examine through role play how arguments start and how they can be resolved
- Play games that encourage co-operation and teamwork (for example, one child leaves the classroom whilst an item is hidden; when the child returns, the other children must help him/her find the object by shouting out “hot” or “cold”.)

## Story 3: Sammy and Sarah find their way home

### Synopsis

The local fishermen are upset because they are not catching as many lobsters as usual - something is taking them from the lobster pots. Dan thinks that the fishermen blame Sarah and Sammy. Sarah and Sammy work together and chase away the culprit - a dogfish - but get lost when the fog comes down. On the way back, the foghorn and buoys guide them back to safety.



SPECIFIC CURRICULUM LINKS: SCIENCE 2 (LIFE PROCESSES AND LIVING THINGS) 5B, 5C; SCIENCE 4 (PHYSICAL PROCESSES) 3C, 3D; GEOGRAPHY 5B; CITIZENSHIP: 2C, 2E



## Suggested extension or follow-up activities:

- Investigate food chains
- Find out where our food comes from
- Discover what sustainable fishing is
- Research how foghorns work
- Visit the Trinity House website and learn about the different types of buoy.

## Story 4: Dan to the rescue

### Synopsis

Dan, the search and rescue dog, helps rescue Sammy after he is hit by a discarded oil can. He also helps Sarah, when she wanders away from home and her feet become entangled in plastic rubbish. Sarah learns that she should stay close to her home at the lighthouse, which is in a Site of Special Scientific Interest, where she is safe.



SPECIFIC CURRICULUM LINKS: SCIENCE 2 (LIFE PROCESSES AND LIVING THINGS) 5C; CITIZENSHIP 2G, 3G



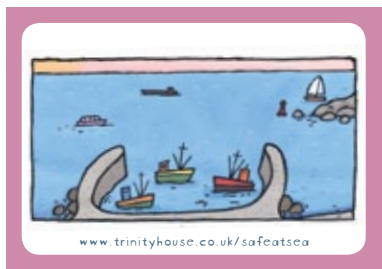
## Suggested extension or follow-up activities:

- Investigate what search and rescue dogs do
- Find out about SSSIs and wildlife sanctuaries
- Discuss the effects of pollution and the environment - talk about litter
- Find out about local recycling.

# Flash cards

## Literacy: Picture cards

A pack of 32 picture cards - 16 pairs of two *Safe at Sea* images including the characters Sammy, Sarah and Dan. These can be used in small groups or in a one-to-one situation.



- With a small group, shuffle the cards and then give three cards to each child. Ask each child to create a story using the pictures they have been given - this can be a verbal or written activity.
- Ask children to choose a single card and then describe it without using the actual word. For example, if they choose a crab they can say that it is orange, or that it has claws or lives in a rockpool, but must not use the word "crab".
- Shuffle the cards and lay them all face down on a table. Children take it in turns to turn two cards face up - if the pictures match, the player keeps the pair; if not, the cards are turned face down again.

SPECIFIC CURRICULUM LINKS: ENGLISH 1 (READING) 1A, 1B, 3A, 3D, 4A

## Numeracy: Number cards

A pack of 32 cards, featuring numbers and mathematical symbols. Numbers from 1 to 26 appear as numerals and words; the remaining six cards have the symbols for addition, subtraction, multiplication, division, equals and a question mark.



- Place the cards in the correct order
- Select odd and even numbers
- Choose pairs of cards and a symbol to practise addition, subtraction, division and multiplication
- Use the symbols to create number problems
- Two players take it in turns to turn up a card. They have to say whether it is higher or lower than the previous card. If a player gets three higher or lower calls in a row, that player keeps the cards. The winner is the person with the most cards.

SPECIFIC CURRICULUM LINKS: MATHS 2 (NUMBERS) 2A, 2B, 2C

# Poster

## Science: Light and dark

An A1 poster with a central illustration showing a lighthouse and a lightvessel, with a border containing further images and a word bank on the theme of light and dark. This can be used as a teaching tool as well as being an attractive item for display.

SPECIFIC CURRICULUM LINKS: SCIENCE 4 (PHYSICAL PROCESSES) 3A, 3B

### Suggested extension or follow-up activities:



- Use the poster to generate discussion about light and dark
- Challenge the children to think of additional words relating to light and dark
- Cover the keywords and ask the children to spell them
- Research online stories and poems on the theme of light and dark
- Write poems or stories on the theme of light and dark.

# Stickers

The single A4 sheet has 35 stickers, with *Safe at Sea* characters, including Sammy, Sarah and Dan.





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