# Suggestions for teachers



**Developing certain subjects in greater detail, and a few clarifications about individual activities**

## 01. Great Adventures and the Indian Ocean

With their classmates, your students can create a time-line frieze covering the period of Great Discoveries, highlighting developments in shipbuilding, navigation instruments, listing the names of the great navigators, the men and women of importance during each time period (artists, writers, kings and queens, etc.), and the places discovered.

## 02. Australia

### Art

*Dot painting* is an art tradition in the central desert of Australia where the "point" technique is used. This technique often symbolizes aboriginal artwork. The colors are limited to four: red (a desert sand ochre hue), white (limestone and chalk), yellow (ochre or yellow flowers) and black (charcoal or burnt grass).

*Dot painting* by the Aborigines can be compared with French "pointillism."

### Activity

Do you know the name of the art movement at the end of the 19th century which was originated by Georges Seurat? Do some research on this movement: its technique, some painters' names, the most widely known works, etc.

### Crossword puzzle answers

Put the following words in the squares:

Horizontal
1 AUSTRALIA / 2 ARID / 3 CANBERRA / 4 COOK / 5 KANGAROOS / 6 ENGLISH / 7 EUCALYPTUS

Vertical
8 INDIAN / 9 KOALA / 10 CROCODILE / 11 EXMOUTH / 12 ABORIGINES / 13 MARSUPIALS / 14 SOUTH

## 01. Finding your way around land or sea

Each major power wanted the meridian to pass through its country. At the Washington Conference in 1884, a majority of countries voted to have the meridian pass through Greenwich. But the French did not agree and continued for a while to use the Paris meridian as the prime meridian! Only in 1911 did France finally adopt the Greenwich line as the prime meridian.

# 05. Fresh water and salt water

**With regard to the experiment demonstrating the presence of salt in seawater:**

The fact that the amount of salt at the start is known makes it possible, at the end of the experiment, to verify that the same amount is still there. It may be concluded that the amount of salt in the oceans is not affected by the water's evaporation.

The most convincing experiment consists of placing a cup of salt water and another cup of plain tap water on a radiator. Quickly the water will evaporate in both cups, but in the first there will be a white sediment at the bottom. You can conclude the experiment by asking what has become of the water and relate it with the work done on the water cycle.

**With regard to the salad bowl experiment:** the water will be warmed by the heat of the desk lamp and will slowly evaporate. The water vapor will collect in small droplets on the plastic wrap and will fall as fresh water into the cup. Since only the water can evaporate, the salt will remain in the salad bowl, leaving the same crystals that were diluted in the water at the start of the experiment. This same principle is used today for harvesting salt from salt marshes near the seacoast.

# The wildlife / biodiversity series

**Bibliography:**

- *Shell,* by Alex Arthur
- *Ocean,* by Miranda Macquitty
- *Seashore,* by Steve Parker - Gallimard "First Discovery Books"
- *Copain des mers,* (in French) by Valérie Traqui, Christian Heinrich, Pascal Robin, publisher Éditions Milan
- *La Mer,* collective work by several authors (in French) "Kaleidoc" collection, publisher Éditions Nathan

# 01. A diverse marine world; the food chain

**Explain the phenomenon of symbiosis.**

It is said that two species live in symbiosis when each benefits from living with the other, with neither experiencing any negative effect. This is the case, for example, with coral polyps and single-celled algae called zooxanthellae. The process is simple: the zooxanthellae, like all plants, produce sugars and oxygen that the coral need to grow. In return, in consuming this food, the coral throw off carbon dioxide and other nutrients that in turn feed the zooxanthellae. They thus complement each other.

# 05. Solar energy

**Some suggestions for energy savings:**

**Heating:** close the doors and avoid overheating the room. **Electricity:** turn off the lights when leaving the room, do not leave appliances on standby. **Waste:** sort waste because, by recycling, energy savings and savings in raw materials consumption can be achieved. In addition, incineration produces greenhouse gases. **Travel and moving about:** try walking, bike riding, and public transportation. **Water:** track down leaks, close the faucet when brushing your teeth, take showers instead of baths, etc.

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