

Source: Excerpted from Science and Children's Literature by Mary Cerullo, published by Heinemann, Portsmouth, New Hampshire. Used with permission.

35. CHANGING OF THE GUARD

Overview:

Each of us has a biological clock that tells us when to wake up and when to go to sleep. Songbirds (and most humans) wake with the day and return to roost at night. Bats erupt from caves and barns at nightfall to hunt for insects. Mosquitoes buzz around in search of blood at dawn and dusk.

Coral reefs are larger and more densely populated than any city on Earth. To make room for all its residents, the coral reef community is divided into creatures of the day, the night, and twilight. As one animal crawls out of its den, another prepares to take it over. The daytime crew depends mostly on sight and color to find or to avoid other residents of the reef. Nocturnal animals prowl a world without light, relying on their keen senses of smell, taste, and touch. In between day and night, large predators roam the reef, alert for weary commuters going home after a day of foraging or groggily waking up for a night on the town. Scientists estimate that one-half to two-thirds of all reef fishes are diurnal, that is, active by day. Another one-quarter to one third sleep by day and hunt by night. Only ten percent of all reef species are most active at dawn and dusk.

Activities:

- 1) Now that you know more about the coral creatures of the day shift, night shift and twilight, which would you rather be? Choose one coral reef animal and write a story about 24 hours in its life. Think about these questions as you prepare your biography: When are you most active? Where do you go to rest? What would you eat? Who eats you? How might you attract a mate or avoid predators? What problems or opportunities do you have in daylight/twilight/nighttime?
- 2) Create a mural of twenty-four hours on the reef, with three different backgrounds: black for night, grey for dawn and dusk, bright blue for daytime. Have students research which animals are active during each period. Draw them and mount the animals they researched on the most suitable part of the diurnal cycle.

NIGHT

EEL
OCTOPUS
SQUIRRELFISH
SPINY URCHINS
HARD CORAL POLYPS

TWILIGHT

SHARK
GROUPER
JACKS
SEVERAL OTHER PREDATORS

DAY

BUTTERFLYFISH
CLOWNFISH
ANGELFISH
CLEANER FISH

Correlation to National Standards from McREL (<http://www.mcrel.org>) :

Life Sciences

5. Understands the structure and function of cells and organisms
6. Understands relationships among organisms and their physical environment