

**PENANG SANGAM HIGH SCHOOL
P.O.BOX 44, RAKIRAKI**

LESSON NOTES

Year/Level: 13 A/B
BIOLOGY

Subject:

Strand	1 Structure And Life Processes
Sub Strand	1.2 Human Evolution
Content Learning Outcome	Understand the evolution of primates and describe adaptations that help primates survive in their habitat.

Evolution of Primates The primates were said to have evolved from tree-dwelling (arboreal) insectivores by adaptive radiation. Living primates belong into two sub-orders.

1. SUB-ORDER: PROSIMIANS

. E.g. Lemurs, Lories, Bush babies, Aye-ayes.

- Prosimians have retained primitive primate characteristics, while the anthropoids have continued to evolve anatomical features derived from the prosimian stock.

PROSIMIAN FEATURES

- Are completely arboreal (tree dwelling)
- Are nocturnal without colour vision, i.e. their retina has no fovea
- Sense of smell highly developed
- Have long snouts
- Eyes do not face directly forward
- Brain relatively small
- Have a moist, naked skin (rhinarium) at the end of the nose
- Upper lip not freely movable and is divided vertically into two
- The second digit of the foot has a claw instead of a nail (toilet claw) used for grooming
- Lower canines and incisors point forward and form a 'comb' like structure also used for grooming
- Breeding is seasonal. They have two uteri
- Can manufacture ascorbic acid (vitamin C)

a. **Lemurs**

- ✓ Found only on the Island of Madagascar- Africa
- ✓ Size range from five inches to a bit over two feet long.
- ✓ Larger lemurs are diurnal and eat a variety of leaves, fruits, buds, bark and shoots; smaller are nocturnal and insectivorous.
- ✓ Some are arboreal while others are terrestrial.
- ✓ Social animals- live in groups.
- ✓ Lifespan is about 19 years.
- ✓ Have rhinarium.

b. **Lorises**

- ✓ Similar in appearance to lemurs, but survived in continental areas of India, Sri Lanka, Southeast Asia, and Africa.
- ✓ largely nocturnal.
- ✓ are slow, cautious, quadrupedal climbers who can suspend themselves on hind limbs leaving hands for feeding.
- ✓ Some are entirely insect eaters while others supplement the diet with leaves, fruits, and slugs.
- ✓ Food foraging is often solitary.
- ✓ Good grasping and climbing abilities and well-developed visual ability
- ✓ Most have a claw-grooming claw on second toe.
- ✓ Life span is about 14 years for lorises.
- ✓ Have rhinarium.

c. **Tarsiers**

- ✓ Three species restricted to island areas in South East Asia.
- ✓ They are nocturnal insectivores, and leap onto prey from branches and shrubs
- ✓ form pair bonds, with the social unit being the mated pair and offspring.
- ✓ have no rhinarium and they have eye sockets enclosed by bone t back and sides.
- ✓ Eyes are enormous, compared to the rest of the body.
- ✓ Are exclusively carnivorous
- ✓ Have large immovable eyes

Activity:

1. Identify the primate group that possesses each of the following features:

W - Dental comb _____

X - Chests flatter from front to back _____

Y - Prehensile tail _____

Z - Can make Vitamin C in their bodies _____