13 Sep' 24

Science

→ systematic study of everything around us, and within us that we can observe

→ (1) observe what is true

Eg: Sun is coming up in the morning and going down in the evening

→ (2) collect data

Eg: Observe the sun for many days in Atlanta

→ (3) make / update your theory

Eg: Sun rises up in the morning and sets in the evening

→ (4) experiment and test your theory

Eg: Test in India — the theory works
Test in a non-rotating space shuttle — theory fails

Loop

HW: Follow the scientific method to study

(1) Body parts (2) Objects floating in water

(3) Light and shadows

→ Textbooks

(1) AP textbooks ES Class 3, 4, 5 (both Social and Science)

(2) NIOS textbooks level A, B, C

(3) Open stax textbooks — Long term
— Physics, Biology, Anatomy, Chemistry, Astronomy

→ AP ES class 3 textbooks Ch. 2 (Plants)

→ HW: Complete these chapters

Next class, AP ES Class 4, Ch. 2 (plants)

20 Sep '24:

Science: Sun example

After step (4), theory worked in Indie but failed in non-rotating space shuttle.

Go back in the loop

(1) More observations — rotating space shuttle

(2) More data — many times in rotating & non-rotating space shuttles

(3) Update the theory:

The earth is rotating and so we see the sun come up & go down everyday

(4) Test: Go near other planets and see if they are rotating. Then land on the planet and check if the sun rises up and goes down.

HW: (1) For body parts, floating objects, lights and shadows — in each case, first identify what you are trying to study.

For the Sun example, we were studying how the Sun rises and sets. But not how hot or which color the Sun is.

(2) In each case, write all the steps one by one — observation, data, theory, test, and loop.

(3) Edit last HW file with above details

HW: AP. ES3 textbook Ch. 2

(1) Collect different types of leaves from your community and make an album

(2) Grow sprouts and plant them in soil