

Moon Phase Loop

Trace a repeating set of moon views.

6.3 "The student will investigate and understand that there is a relationship between the sun, Earth, and the moon. Key ideas include Earth has unique properties; the rotation of Earth in relationship to the sun causes day and night..."

NAME _____

DATE _____

1 LABEL THE MODEL _____ Word bank below

Write one process from the word bank in each numbered arrow box. Then use the completed loop to answer the questions.

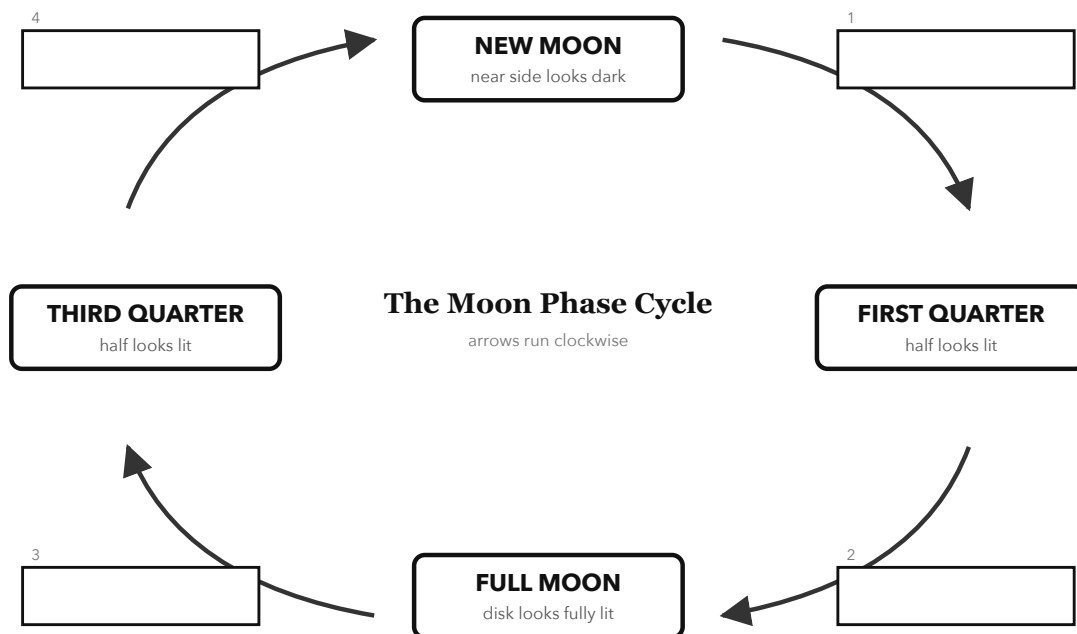
WORD BANK

orbits through first quarter

orbits through fourth quarter

orbits through second quarter

orbits through third quarter



2 RUN THE MODEL Use your finished diagram

1 Start at NEW MOON and follow two arrows. Which stage do you reach?

2 Which process carries the model from FULL MOON to THIRD QUARTER?

3 Which two stages show a half-lit moon?

3 CHECK IT Before you turn it in

☐ I can order the four landmark phases.

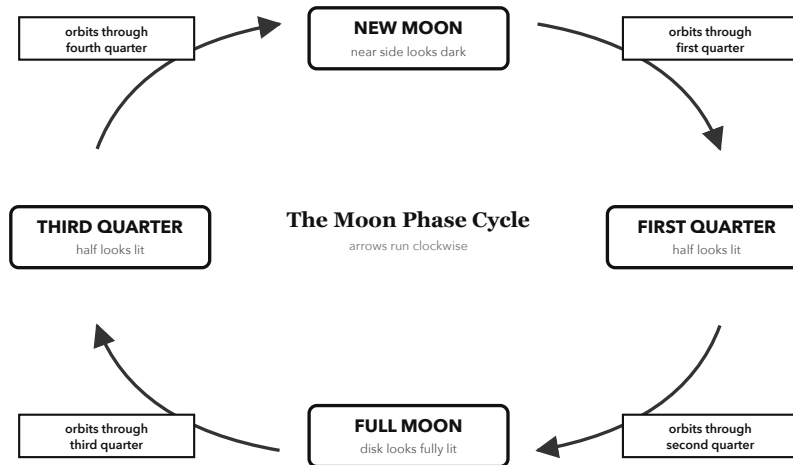
☐ I can trace one full moon-phase loop.

☐ I can connect the Moon's orbit to changing views.

TEST THE MODEL

What changes in the real moon-phase system does this four-stage model leave out?

PART 1 • COMPLETED MODEL



PART 2 • RUN THE MODEL

1. **FULL MOON** (Start at NEW MOON and follow two arrows. Which stage do you reach?)
2. **orbits through third quarter** (Which process carries the model from FULL MOON to THIRD QUARTER?)
3. **FIRST QUARTER and THIRD QUARTER** (Which two stages show a half-lit moon?)

TEST THE MODEL (SAMPLE ANSWERS)

- It leaves out the crescent and gibbous phases.
- It does not show the gradual changes between the four landmark phases.

This simplified model uses four landmark phases. Each arrow represents roughly one quarter of the repeating phase cycle as the Moon orbits Earth while Earth and the Moon move around the Sun.