

Test a phase-wheel model

Autumn 1 · Week 7 · Lesson B

Describe the Moon orbiting Earth roughly monthly; explain moonlight as reflected sunlight and ordinary phases as changing views of the illuminated half.

Tuesday ·40 minutes: 32-minute workshop,4-minute pupil feedback,4-minute exit.

Name:_____ Date:_____. Make and check a phase wheel or three-view strip. Drawings or directing an adult are equal routes.

1. Retrieve and choose a route ·4 min

Say or point to the source of moonlight. Choose pre-cut circles, your own three-circle drawing, or directing an adult's model. Agree before any room-light change.

2. Model three views -20 min

Write, draw, point or dictate as agreed with your teacher.

Keep torch direction fixed. Adult holds the ball slightly above observer-shadow height. Check near the light direction, to the side, then opposite the light. From the same viewpoint, record what is seen. Still-diagram route: describe the expected view and label it as a model prediction.

Ball position	Visible lit portion	New / half / full
Near light direction		
Side position		
Opposite light direction		

3. Draw or arrange the phase strip

Write, draw, point or dictate as agreed with your teacher.

Draw three equal circles in the space below or use pre-cut circles. Shade the part NOT seen lit. Label new, half and full; circle shape stays round. Add one sentence explaining what changes.

4. Pause and check ·2 min

Ask an adult or chosen partner to use the same observer position. Check one view and one label. Did the Moon/ball change shape, or the visible lit part?

5. Correct and reset ·6 min

Write, draw, point or dictate as agreed with your teacher.

Correct one label or drawing. Explain one thing the model shows. Stretch: name a model limit or distinguish a lunar eclipse. Restore room lighting and return kit.

6. Pupil feedback ·4 min

What helped or hindered access/understanding? Ask for one useful change, or pass. Adult explains what can change and checks whether it helped.

7. Exit ·4 min

Write, draw, point or dictate as agreed with your teacher.

Choose the agreed question. Supported: does the Moon make its own visible light?
Standard: how long is one orbit? Stretch: explain why ordinary phases are not Earth's shadow.

CHOOSE A RESPONSE ROUTE

Ways to show your understanding

Choose the route agreed with your teacher. You do not need to complete every route.

Supported

Arrange three labelled views with an adult, direct one model position and point to the visible lit part.

Standard

Make a phase wheel/three-view strip, check three positions and explain changed visible lit portion while Moon remains round.

Stretch

Explain phases, distinguish an eclipse and explain one limitation of torch/ball model.