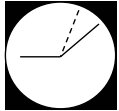




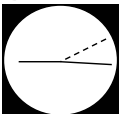
3 minutes



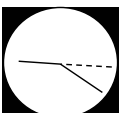
6 minutes



1½ minutes



5 minutes



4 minutes



2 minutes



4 minutes



1 minute



20 minutes



4½ minutes

**Science Organization:** Class gets oriented to the day's lesson

Students are seated at table groups. The teacher collects their worksheets, and then instructs students to take out their binders to copy the homework assignment. He makes note of students who are off-task by writing their names on the board.

**Independent Seatwork:** Students make sunspot data sheets

Once the class is ready, the teacher distributes paper, rulers, and compasses to students in preparation for making the sunspot data sheets. The students prepare their individual data sheets, drawing the sun circles with compasses set at four and a half centimeters.

**Science Organization:** Class goes outside for sunspot activity

Students gather their materials and go outside.

**Independent Practical Work:** Students work on sunspot activity

Students work in groups of two or three. They mark the sunspots and track the Sun's westward movement through a series of marks. The teacher goes around to the different groups checking their progress.

**Science Organization:** Class returns to classroom

The class goes back to the classroom and put materials away. The teacher, again, makes note of students who are off-task by writing their names on the board. He instructs the class to take out the "Pulley Potpourri" lab sheet from the previous day's lesson.

**Whole-Class Seatwork:** Teacher goes over pulley lab sheet

The teacher goes over the lab sheet, telling the class that he's just going to "recap" since they had already discussed it yesterday. He reviews the three pieces of data they need to collect: (1) effort distance, (2) effort force, and (3) resistance force. He also starts to discuss how they should measure these values.

**Whole-Class Practical Work:** Teacher demonstrates parts of the activity

The teacher goes to the side of the classroom where the pulleys are set up at the lab stations. The teacher demonstrates how to measure the resistance distance and the effort distance. He clarifies what needs to be measured and recorded (i.e., starting point and ending point) to determine the distance that the weight attached to the string moved. He also shows the students how they should pull the string straight down to get the most accurate measurements. The teacher informs the class that they will only be completing three of the four pulley set-ups, highlighting the importance of getting good data. He tells them they will work on the fourth pulley set-up on mechanical advantage another time.

**Science Organization:** Teacher assigns students into groups

The teacher looks around the classroom to determine the groups. He assigns students to lab tables.

**Independent Practical Work:** Students work on pulley activity

There are four to six students sitting at each lab table, with students working in pairs or groups of three. Students use the pulleys to pull weights tied to a string. Some are confused with what they are measuring. The teacher walks around the classroom providing assistance and clarification as needed. He also checks the data of those students who say have finished the activity.

**Science Organization:** Students put away materials

Students put their materials away and clean up their stations while the teacher answers questions about the activity privately for a couple of students. The teacher announces to the class they will have a quiz tomorrow. Students prepare to leave.