

Zoo Time! Thematic Unit

Grade Level: 4th

Subjects:

Primary: Mathematics

Integrated Activity: Science

Reporting Category:

Measurement and Geometry

Lesson Summary and Connections:

Explore the concept of telling time to the hour and half hour with Zoo Time! This thematic unit is a virtual tour, including eight habitats and thirty-two animal encounters. Each habitat has a schedule, integrated science activities, and embedded formative assessments. The supplemental materials for this ILP include a sample plan for introducing the thematic unit, a four-week planning guide, and materials that can be edited for differentiation. Integrated science content aligns with VESOL at the elementary, middle, and high school levels.

Lesson Components Links			
<u>VESOL(s) Complexity Continuum</u>	<u>Functional Skills</u>	<u>Assistive Technology</u>	<u>Materials</u>
<u>Vocabulary</u>	<u>Common Misconceptions</u>	<u>Student-Friendly Outcome(s)</u>	<u>Introductory Activity</u>
<u>Plan for Instruction</u>	<u>Differentiation</u>	<u>Reflection</u>	<u>Formative Assessment</u>
<u>Word Wall Cards</u>	<u>Supplemental Materials</u>	<u>Practice Items</u>	<u>Integrated Activity</u>

VESOL(s):

M-4.18: Tell time in whole hour and half hour increments using a digital clock, including with context.

Complexity Continuum:

Times could be on the hour and half hour, a.m. or p.m., and the terms noon and midnight could be included. Context will relate the time to an appropriate activity.

Functional Skill(s):

- Students will make connections to the passage of time by using a visual schedule.
- Students will sequence or retell events.
- Students will answer questions about an activity.
- Students will make choices, or vote, to direct an activity.

Assistive Technology/AAC (Augmentative and Alternative Communication):

- Use a visual schedule to display the day's events. Reference during transitions to reinforce the concept of elapsed time. A template is included.

Materials:

- M-4.18 Supplemental Materials: Zoo Time (whole & half hour, digital) – These materials can be used in digital format. Select items may be used in printed form. Templates for additional adaptations have been provided. Edit the slides to customize the experience.

Vocabulary:

Prior Knowledge

- | | | | |
|-----------------------------|----------------------------|--------------------------------|---------------------------------|
| • Numbers (0-12, 30) | • Time | • Measurement | • Clock |
| • Digital Clock | • Hour | • Minute | • a.m. and p.m. |
| • Noon | • Midnight | • Elapsed Time | • Analog |
| • Clockwise | • Hour Hand | • Minute Hand | |

Current Vocabulary

- | | | | |
|--------|--------|----------|-------------|
| • Time | • Hour | • Minute | • Half hour |
|--------|--------|----------|-------------|

Common Misconceptions:

- The concept of time includes a specific measurable point in time (hour and minute), time intervals (elapsed time), and time span (past, present, and future).
- Developing an understanding of time includes making connections between common activities and the times when they typically occur.
- Students may need additional practice with identifying numerals (0-12).

Student-Friendly Outcome(s):

- Students will be able to tell time to the hour and half hour using a digital clock.

Introductory Activity:

- Number Talk: Set a visual timer for two minutes and tell students the number talk will begin when the countdown ends.
 - o Look at the pictures and think about:
 - What do the pictures have in common?
 - What is different?
 - o Which picture does not belong with the group?
 - How is it different?
 - o There can be more than one right answer.

Number Talk

Look at the pictures and think about:
What do the pictures have in common?
What is different?

When the timer goes off, advance to the next slide for the group discussion.

Number Talk: Which one does not belong?

Which picture does not belong with the group?
How is it different?
There can be more than one right answer.

Plan for Instruction:

- Begin with word wall wonders. Review word wall card for clock by discussing the definition, meaning, and usage. Highlight where it will be placed on the word wall.

Word Wall Wonders

What is it?

How is it used?

Where is it?

VAAP Version

Clock

minutes, one-half Hour,
one Hour

digital

analog

30 minutes = one-half hour
60 minutes = 1 hour
24 hours = 1 day

Virginia Department of Education 2023 VESOL Mathematics Vocabulary

- Continue with a reading selection from Time: An Adapted Book, with embedded vocabulary cards for time, digital clock, hour, and half hour.

Time to read!

Time

An Adapted Book

Time

An Adapted Book

Table of Contents	
What is time?	1
Clocks	2
Telling Time	5
a.m.	6
p.m.	7
Time to the Hour	8
Time to the Half-Hour	9
Time to the Quarter-Hour	10
Time to the Minute	11
Time Passes	12
Word Wall Cards	14

What is time?

1

Time describes the length of an event or when an event takes place.

Daytime

Nighttime

Time

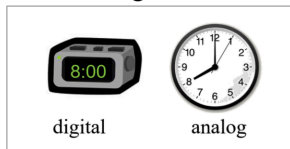
Definition:

- The measured or measurable period during which an action begins or continues.
- The point or period when something occurs.
- A moment, hour, day, or year as indicated by a clock or calendar.

Clocks

2

A clock is a tool for measuring time. There are two types of clocks: digital and analog.



Digital clocks show time in hours and minutes.

3



Digital Clock

Definition: A clock that shows the time in numerical digits.



Telling Time

5

AM

Each day has two parts, a.m. and p.m.

PM



Clocks are used to tell time within a day.



midnight to noon
12:00am → 12:00pm

1 day = 24 hours
1 hour = 60 minutes
1 minute = 60 seconds

noon to midnight
12:00pm → 12:00am

Time to the Hour

8



When telling time to the hour, the word o'clock is used after the numeral.

The time on this clock is eight o'clock a.m.

Hour

Definition: A part of the day, lasting 60 minutes.



Time to the Half-Hour

9



There are thirty minutes in a half-hour.

This clock shows ten-thirty a.m.

It can also be read as half-past ten.

Half-Hour

Definition: There are thirty minutes in a half-hour.



- Take a brain break then introduce Zoo Time! An Adapted Book:





My name is Kim.
I am here to help with the schedule.

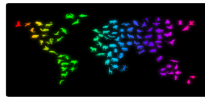


9:00 am Petting Zoo  	10:00 am Grasslands  	11:00 am Coniferous Forest  	12:00 pm Deciduous Forest  
1:00 pm Rainforest  	2:00 pm Savanna  	3:00 pm River and Lake  	4:00 pm Coastal and Arctic  



Hi, I'm Rick,
your virtual
tour guide.





Together, we will explore aquatic, grassland, forest, desert, and tundra biomes.

We will learn about the animals that live in these habitats, their characteristics, how they interact with their environment, and adaptations for survival.

Explore More

National Geographic Resource: MapMaker: Biomes - <https://education.nationalgeographic.org/resource/mapmaker-biomes/>



Hi, I'm Lucy.
I am your
host for
Zoo Time!



Check the signs for special event times.



Photo Opportunity
8:00



Meet and Greet
8:30



- Then, introduce the petting zoo schedule and habitat overview.

VAAP Integrated Lesson Template

We have time for two stops today. First, choose between cattle and goats. Then choose between sheep and pigs. We can explore the others another time.

Petting Zoo Schedule

- First, cattle
- Next, goats
- Then, sheep
- Last, pigs

9:00 a.m.

Animals in the petting zoo come from grassland and forest biomes. The petting zoo has animals humans raise on farms, they provide people with food or materials used to make goods.

- Use a structured language opportunity for students to direct the learning. Explain that the zoo is a very big place and will require multiple visits to explore each exhibit. Part of the fun of going to the zoo is that you get to choose what to do. Ask students to use the choice board to vote for which animal to visit.

Time

9:00 a.m.

Habitat

Which animal would you like to learn about?

- Tally votes, making a show of which response option (cattle or goats) had the most votes. In true choose your own adventure style, advance to the appropriate page, and say, it is 9:00 a.m. and we are at the petting zoo, let's meet the . . .
 - Cattle

Cattle live in the grassland and eat grass. The cows make milk for their calves. The cattle give farmers many products, including milk, beef, leather, and manure.

9:00 a.m.

Zoo Time Practice Problem

Find the clock that matches.

Nine o'clock

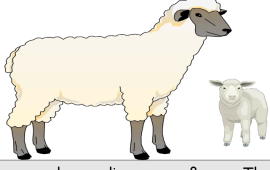
9:00

6:30

10:00

- Sheep

VAAP Integrated Lesson Template



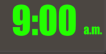


These sheep live on a farm. They like to graze in grasslands or mountains. Sheep give farmers milk, wool, and hides.




Zoo Time Practice Problem

Look at the clock.
What time does it show?

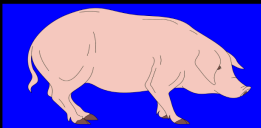


Four o'clock a.m.

Six o'clock a.m.

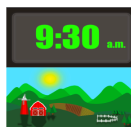
Nine o'clock a.m.

- Use a structured language opportunity (choice board) for students to direct the learning.

Time 	Habitat 
Which animal would you like to learn about?	
	

- Advance to the corresponding page:
 - Goats





These goats live on the farm, others live in the grasslands or mountains. The goats eat grass and hay. The goats make milk. The goats give farmers milk, meat, and fur.




Zoo Time Practice Problem

Find the clock that matches.

Nine thirty

8:00

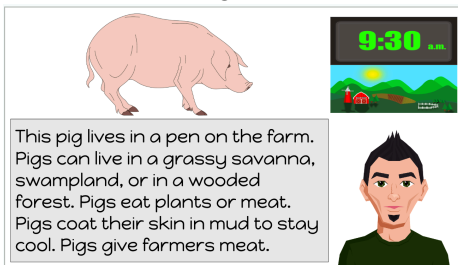
9:30

2:30

- Special Event: Meet and Greet with the goats at the Virginia Zoo.



o Pigs



- Spin the wheel for additional practice problems.



Differentiation:

The formative assessment and supplemental materials for this lesson can be edited to differentiate text complexity or change the field of response options. A variety of digital resources are linked throughout for further exploration.

Reflection:

Review the learning target, "I can tell time in whole hour and half hour increments using a digital clock." Ask, "Did you meet today's learning target?" A field of four response options is provided for the structured language opportunity: I still have questions, I see how it works, I have a plan, and I can do this!

Reflection	
Learning Target: I can tell time in whole hour and half hour increments using a digital clock.	
Did you meet today's learning target?	
- I still have questions... - I see how it works. - I have a plan. - I can do this!	

Formative Assessment:

Example problems, presented with a field of three response options, are embedded within the integrated activity. The example problems included in the supplemental materials have been added to a spinner (<https://wheelofnames.com/vv7-zxt>) to add an interactive component while randomizing examples. These can be printed for work samples or data sheets.

Notes:

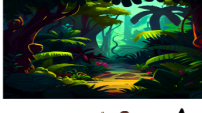
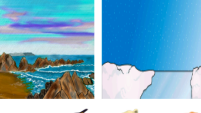
The supplemental materials and integrated activity have been designed to have relevance across grade levels. Make a copy of the file and edit the materials to adjust text complexity. Make it a game and have fun learning!

Integrated Activity:

The integrated activity for this lesson is a thematic unit that simulates a virtual trip to the zoo where students explore different habitats, learn about the animals, follow a schedule, and practice telling time to the hour and half hour using digital clocks. Integrated content materials are intended to be read aloud.



VAAP Integrated Lesson Template

9:00 am Petting Zoo  	10:00 am Grasslands  	11:00 am Coniferous Forest  	12:00 pm Deciduous Forest  
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Word Wall Cards:

VAAP Version

Clock time



digital



analog

VAAP Version

Clock

minutes, one-half Hour,
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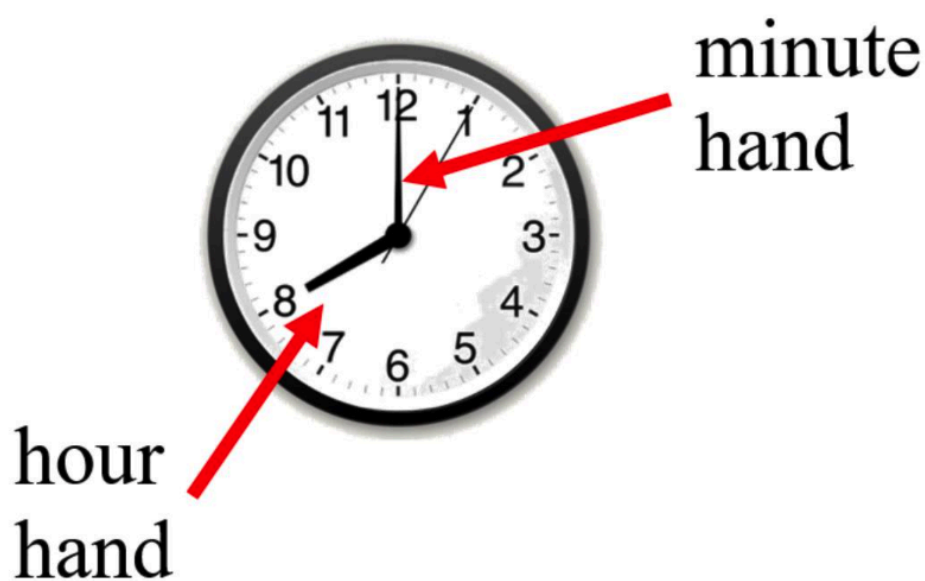
Clock time



digital

VAAP Version

Clock time



analog

VAAP Version

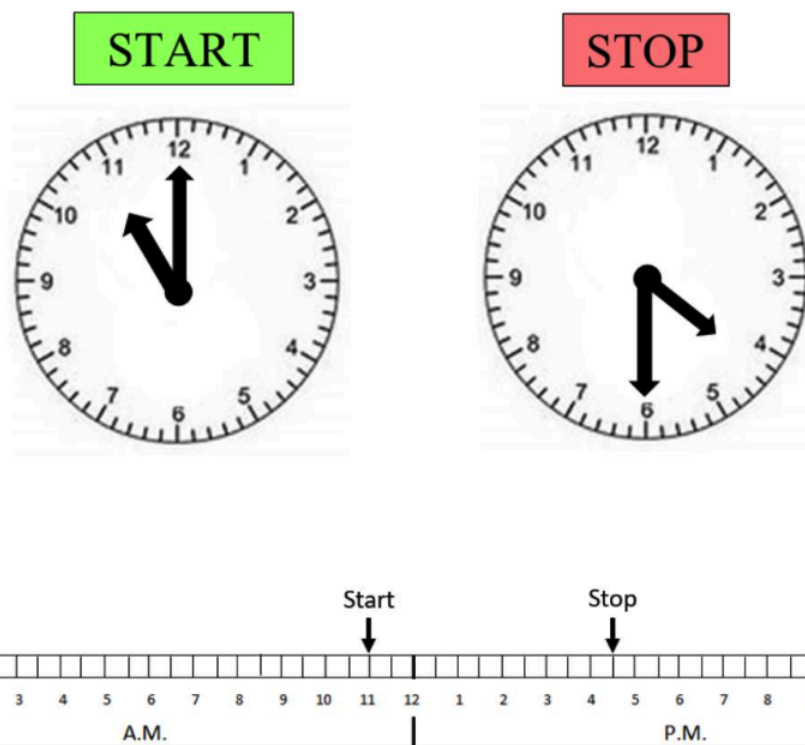
Clockwise



VAAP Version

Elapsed Time

amount of time that has passed between two given times

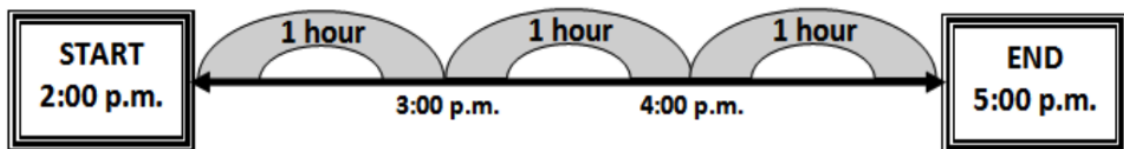


VAAP Version

Elapsed Time

amount of time that has
passed between two
given times

The movie starts at 2:00 p.m.
and ends at 5:00 p.m.



The movie is three hours long.

VAAP Version

AM



midnight to noon

12:00am → 12:00pm

VAAP Version

PM



noon to midnight

12:00pm → 12:00am

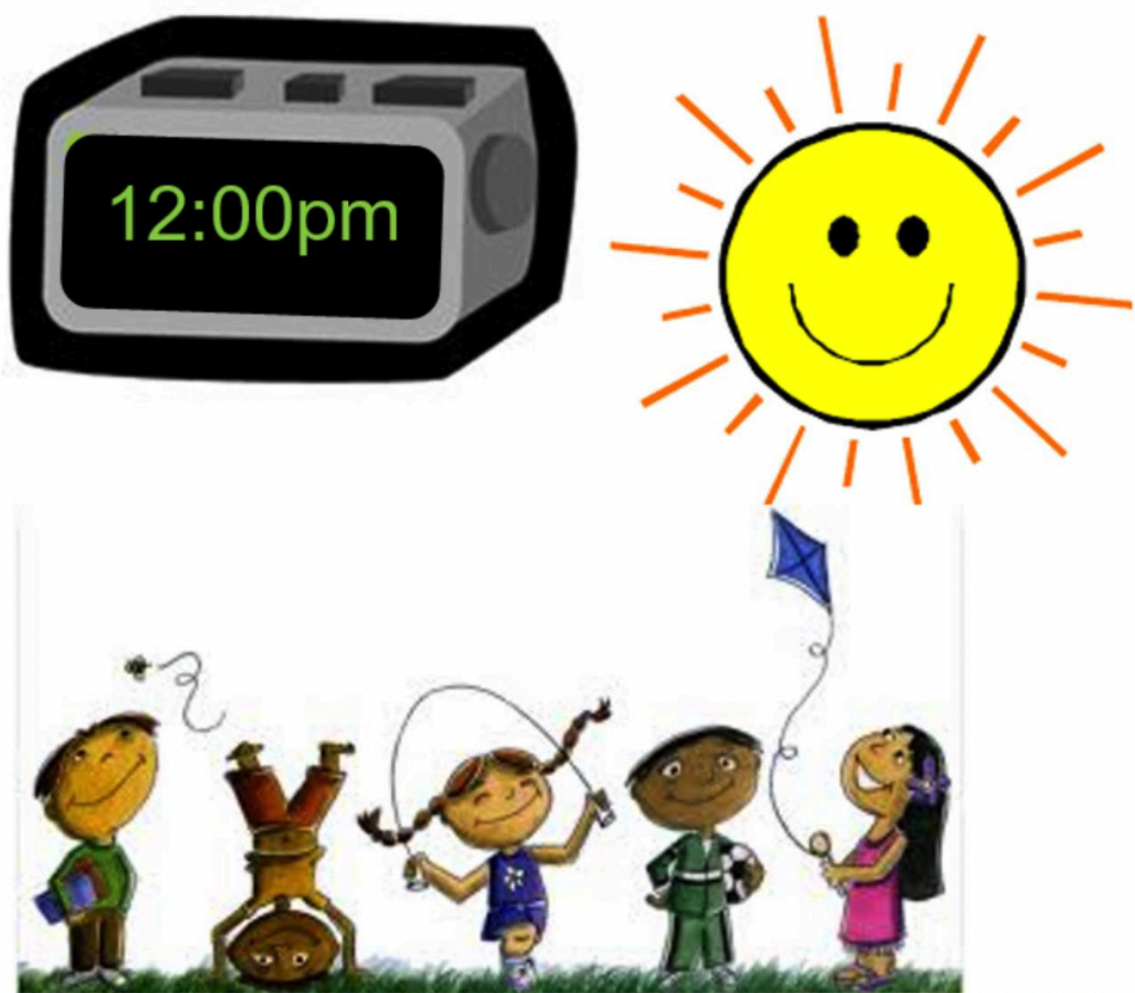
VAAP Version

Midnight



VAAP Version

Noon



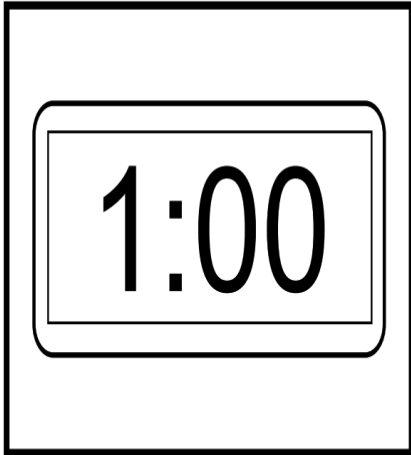
Supplemental Materials:

- M-4.18 Supplemental Materials: Zoo Time (whole & half hour, digital)
- M-3.13 Supplemental Materials: Time Flies on the Farm (time to the hour/digital clock)
- M-3.1 Supplemental Materials: I See an Apple Tree (Match Number Names to Numerals from 0-20)
- M-4.1 Supplemental Materials: Fall in Love with Numbers

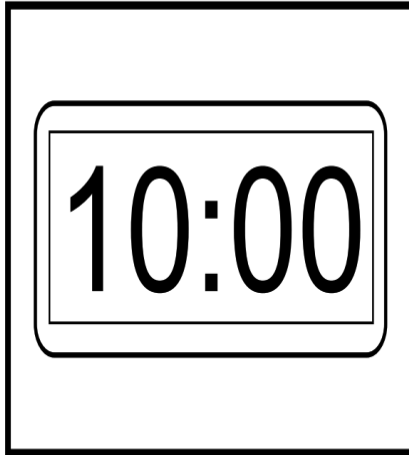
Practice Item:

Item 9

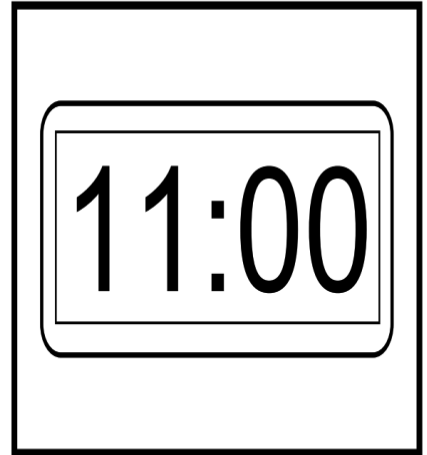
Recess starts at ten o'clock. Which clock shows ten o'clock?



A



B



C