

# ”Rock Around the Clock”

Submitted by Jackie Gibson, Corydon Elementary



## **Introduction**

This activity is geared for grades 3-12 and can be adapted accordingly. This challenging lesson will allow students to identify rocks, minerals, and gems; practice on the math skills of telling time; and use prior knowledge to alphabetize scientific words.

## Objective

- 1.) To classify rocks, minerals and gems according to their components.
- 2.) To understand and be able to identify the differences between sedimentary, igneous, and metamorphic rocks.

## Standards

<b>Activity:</b>	
<b>Mathematics</b>	3.1.4, 3.1.5, 3.2.7, 3.5.5, 3.6.3 3.1.1, 3.1.2, 3.1.3, 3.2.3, 3.2.6
<b>Science</b>	3.3.6, 3.6.1, 3.6.5, 3.6.8, 3.6.9, 3.1.1, 3.1.2, 3.1.3, 3.2.3, 3.2.6, 3.1.4, 3.1.5, 3.2.7, 3.5.5, 3.6.3
<b>Language Arts</b>	3.2.9, 3.4.4, 3.6.8, 3.6.9, 3.7.3, 3.7.15, 3.7.8

## Unit Suggestions

Can simplify for younger students or expand for upper grades as needed.

## Time Allotment

- 30-60 minutes for grades 3-12
- 15-20 center time for grades k-2

## Rubric

Each block worth up to 5 points, with a possible 75 points:

Sort	Sedimentary	Igneous	Metamorphic
Sort	Rock	Mineral	Gem
Math	Clock	One – Onyx Match	Precious or semi-precious
Names	Match	ABC order	Spelling
Work Habits	Independent	Cooperation	Followed directions

## **Materials**

- An assortment of unnamed rocks, minerals, and gems.
- Various pictures/ photos/ books featuring the above.
- Class notes from prior lessons, if applicable.
- Magnifying glasses, drawing paper, scissors
- Mineral test kit
- Clock outline or student drawn representation
- Paper & pencils

## **Set-up**

This is a 30-60 minute activity, depending on class length, student grade level, and interest. Students may work individually, in pairs, or small groups with or without assistance from teacher. Can also be used as a center activity, once taught.

## **Directions**

### **Step 1**

Each student or group of students should have all materials listed above. Students could be assigned jobs such as recorder, tester, artist, speaker, etc. Students could divvy up groups of rocks for specific reasons, as well.

### **Step 2**

Sort rocks, minerals, gems into obvious groups first, using prior knowledge such as sedimentary, igneous, and metamorphic rocks, and/or reference materials.

### **Step 3**

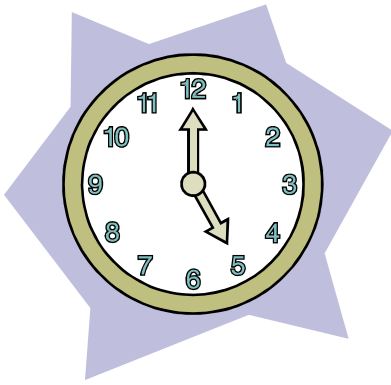
Test some or all obvious minerals by streak, hardness, and color (physical features). Try to name as many as possible, using reference materials as needed. Use mineral kit.

### **Step 4**

Test gems / gemstones for the 4 C's (clarity, color, cut and carat). Teacher can provide faux stones to represent authentic gems. Try to name as many as possible, using reference materials as needed.

### **Step 5**

Once majority of rocks, minerals, or gems have been tested and named, prepare one or more clock outlines with moveable hands.



### **Step 6**

Write down all identified examples on separate paper. Then rewrite them in ABC order.

### **Step 7**

Next, place a rock beside each number on the clock – according to the number – name must correspond with correct number. Example: one = onyx, two = talc, etc.

### **Step 8**

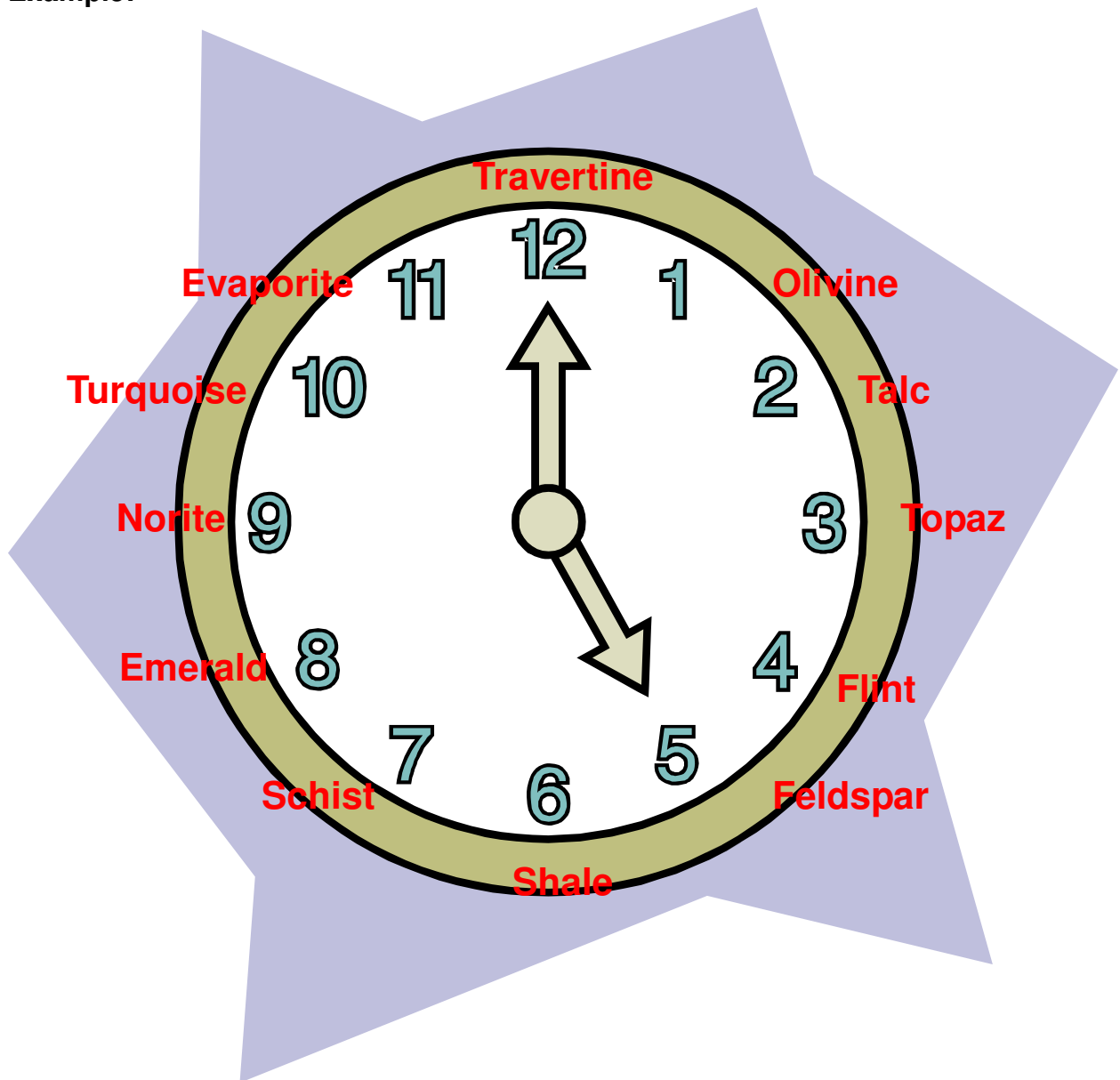
Hopefully, students will be able to match each number to a rock, mineral or gem. If not, students can look up a “T” or “N” named rock in a reference book. They can draw a picture if one is not available.

### **Step 9**

After the steps above, students can take turns turning the hands on their clocks to identify rocks, minerals, and gems. They can orally describe each sample and use scientific terms accordingly. Share with others.



**Example:**



**Examples:**

One: Olivine, obsidian, onyx, opal

Two: Talc, turquoise

Three: Tourmaline

Four: Fluorite, flint

Five: Feldspar

Six: Slate, shale, schist

Seven: Sandstone

Eight: Emerald, edogite

Nine: Norite, nitratine

Ten: Topaz

Eleven: Evaporite

Twelve: Travertine, tektite

**Example:** Put chosen words in ABC order:

- 1.) Emerald
- 2.) Evaporite
- 3.) Feldspar
- 4.) Flint
- 5.) Norite
- 6.) Olivine
- 7.) Schist
- 8.) Shale
- 9.) Talc
- 10.) Topaz
- 11.) Travertine
- 12.) Turquoise