

EMPOWERING TEACHERS

Comprehension Instructional Routine: Compare and Contrast the Topics in Two Texts

Preparation/Materials: two large texts for the teacher of “The Earth” and “Mercury,” two large pieces of chart paper, one large graphic organizer, notebook paper, student copies of graphic organizer or notebook paper folded into thirds, pencils

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- *Italicized sentences are what the teacher does*
- **Bold type is what the teacher says**
- Regular type is what the student(s) say
- **Bullet (•) and bolded type are what the teacher and student(s) say in unison**
- Teacher or student slides finger under underlined letter(s) or word(s)



NOTE: This routine is consists of three lessons.

Day 1

Read and record the details from “The Earth” on a large chart.

Display the teacher’s copy of the text. Point to the vocabulary words as you define them. The numbers in the text will be in light gray as an easy reference to the teacher. Do not read the numbers.

The title of this text is “The Earth.” There are several words in this text that we are going to talk about before I read.

solar system: the eight planets and the moon that travel around our sun

revolves: to move around something in a circle

atmosphere: the gas or air around the earth or another planet

Listen and follow along as I read “The Earth.”

The Earth

1 The planet earth is part of the solar system. 2 All planets revolve around the sun. 3 The earth is the 3rd planet from the sun. 4 The sun gives off heat to warm the earth by day. 5 At night, the earth stays warm because its atmosphere keeps the heat in. 6 We think other planets are too hot or too cold for things to grow. 7 On earth, we have fertile ground, water and plants. 8 This makes it possible for animals and people to live on the earth.

I want to remember all the important information from the passage I just read. So, first I ask myself, who or what is this text mostly about? This text is about the Earth. Then I ask myself, what are some of the important things I learned about the Earth? I am going to write the details about the Earth on this chart paper.

Display large chart paper. Write ‘Earth’ at the top. Distribute student notebook paper and pencils. Tell students to write ‘Earth’ at the top of their paper. Collect these student charts at the end of the lesson. They will be used during the routine on Day 3.

Point as you reread each sentence.

Read sentence 1.

In the first sentence, I learned that the Earth is a planet and it is part of the solar system.

So I will write ‘planet’ and ‘part of the solar system’ on the chart.

Now you write ‘planet’ and ‘part of the solar system’ on your notebook paper chart.

Read sentence 2.

In the second sentence, I learned that the Earth revolves around the sun.

So I will write ‘revolves around the sun’ on the chart.

Now you write ‘revolves around the sun’ on your paper.

Let’s do the next sentences together. *Teacher and students choral read the sentences.*

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Read sentence 3.

In the third sentence, we learned that the Earth is the 3rd planet from the sun.

What did we learn in this sentence?

- It is the 3rd planet from the sun.

Let's write '3rd planet from the sun' on our paper/chart.

Repeat this process for sentences 4 & 5. Then use the Student Practice Task format below. Continue to write all responses on the large chart.

Now it is your turn to complete the remaining sentences.

Let's read the next sentence.

Let's read sentence 6.

In the sixth sentence, did you learn about the Earth?

no

That's right. This sentence does not tell us about the Earth.

Let's read sentence 7.

What did you learn about the Earth?

It has fertile ground.

It has water and plants.

Yes. Write 'it has fertile ground, it has water, and it has plants' on your paper.

Let's read sentence 8.

In the eighth sentence, what did you learn about the Earth?

Animals live on earth.

People live on earth.

Write 'animals live on earth' and 'people live on earth' on your paper.

The completed chart should look like this:

planet
part of the solar system
all planets revolve around the sun
3rd planet from the sun
warmed by the sun
has an atmosphere
the atmosphere keeps the heat in
fertile ground
water and plants
animals and people live on earth

Day 2

Repeat the process from Day 1 using a new piece of chart paper and the text "Mercury."

Mercury

1 Mercury is one of the planets in our solar system. 2 It is closest to the Sun. 3 The Sun makes it very hot during the day. 4 There is almost no atmosphere on Mercury to keep in the heat. 5 So, at night it is very cold because the heat escapes from the planet. 6 Mercury has a hard, rocky surface. 7 It is too hot for plants, animals, or people to live on Mercury.

I want to remember all the important information from the passage I just read. So, first I ask myself, who or what is this text mostly about? This text is about Mercury. Then I ask myself, what are some of the important things or details I learned about Mercury? I am going to write the details about Mercury on this chart paper.

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When completed, the chart should include the following details:

- planet
- part of the solar system
- 1st planet from the sun
- very hot during the day
- almost no atmosphere
- cold at night
- hard, rocky surface
- no plants
- no animals or people live on Mercury

Day 3

Use the following Comprehension Instructional Routine: Compare and Contrast with the texts “The Earth” and “Mercury” with their respective charts. This format mainly employs one word or short phrases rather than complete sentences for the responses.

TEACHER EXPLAINS TASK

We are going to compare and contrast topics from two texts. We read “Mercury” and “The Earth” and wrote the important details from the text by reviewing information from each sentence. Now we will use both texts to compare and contrast Mercury and the Earth.

TEACHER MODELS TASK

When we compare, we learn how things are similar or alike. When we contrast, we learn how things are different or not alike. We will ask ourselves questions about the similarities and differences between the two texts. Signal words are not usually used when we compare and contrast topics from two different texts. We are going to use a graphic organizer to compare and contrast “The Earth” and “Mercury.”

Display graphic organizer and point to the sections as they are mentioned.

This graphic organizer is similar to a Venn diagram and is used to compare and contrast. It consists of a sheet of paper that is divided into three sections.

This section represents the Earth (*write Earth at the top of one circle*) and this section represents Mercury (*write Mercury at the top of the other circle*). I will write all that is only true about Earth in this section (*point to the empty space below Earth*) and all that is only true about Mercury in this section (*point to the empty space below Mercury*).

The place where the sections overlap represents how they are similar or alike (*write Same at the top of this section*). So I will write everything that is the same about the Earth and Mercury in this space.

Now I will reread the text “The Earth.” Follow along as I point to the words.

The Earth

- 1 The planet earth is part of the solar system.
- 2 All planets revolve around the sun.
- 3 The earth is the 3rd planet from the sun.
- 4 The sun gives off heat to warm the earth by day.
- 5 At night, the earth stays warm because its atmosphere keeps the heat in.
- 6 We think other planets are too hot or too cold for things to grow.
- 7 On earth, we have fertile ground, water and plants.
- 8 This makes it possible for animals and people to live on the earth.

Mercury

- 1 Mercury is one of the planets in our solar system.
- 2 It is closest to the Sun.
- 3 The Sun makes it very hot during the day.
- 4 There is almost no atmosphere on Mercury to keep in the heat.
- 5 So, at night it is very cold because the heat escapes from the planet.
- 6 Mercury has a hard, rocky surface.
- 7 It is too hot for plants, animals, or people to live on Mercury.

When we read these texts before, we recorded the details about each planet on separate chart paper.

Let’s all read the details we learned about Earth. *Point to each detail on the chart.*

- a planet
- part of the solar system
- all planets revolve around the Sun
- 3rd planet from the Sun
- warmed by the Sun
- has an atmosphere

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TEACHER MODELS TASK (continued)

- atmosphere helps keep it warmer at night
- fertile ground and water
- plants, animals, and people

This is our chart for Mercury. Let's all read the details we learned about Mercury. *Point to each detail on the chart.*

- a planet
- part of our solar system
- closest planet to the Sun
- very hot during the day
- almost no atmosphere
- very cold at night
- a hard, rocky surface
- no plants, animals or people

We have just reviewed the details about two different topics, the planet Earth and the planet Mercury. I am going to compare and contrast these two planets. I will use this graphic organizer to record how they are similar and how they are different.

I am going to read the first detail on the chart about the Earth.

It says it is a planet.

Now I am going to look at the chart about Mercury to see if it tells me it is a planet.

Yes, it says it is a planet. This makes Earth and Mercury similar. So I will write 'planets' in the middle section under Same.

After writing the detail on the graphic organizer, cross out the information on the charts. Repeat this throughout the routine.

This is the next detail on the chart: Earth is part of the solar system.

Now I am going to look at the chart about Mercury to see if it is part of the solar system.

Yes, it says Mercury is part of the solar system.

This makes Earth and Mercury similar.

So I will write 'part of the solar system' under Same.

I can summarize what we've learned about the two topics by using the graphic organizer as a guide. To summarize, I would say this:

The Earth and Mercury are planets in the same solar system.

TEACHER AND STUDENTS PRACTICE TASK TOGETHER

Now, we're going to work together to compare and contrast the planets in the two texts.

Remember, when we compare, we learn how things are similar or alike. What do we learn when we compare?

- We learn how things are similar or alike.

When we contrast, we learn how things are different or not alike.

What do we learn when we contrast?

- We learn how things are different or not alike.

Let's look at the graphic organizer used for comparing and contrasting. *Give students a graphic organizer or notebook paper divided into thirds, and pencils. Pass out students' charts of Earth and Mercury.*

Remember, this section represents the Earth. *Point to the space.*

What does this section represent?

- It represents the Earth.

Write 'Earth' on your organizer. *Pause as needed.*

We will write all that is only true about Earth on this section *Point to the empty space below Earth.*

This section represents Mercury *Point to space.*

What does this section represent?

- It represents Mercury.

Write 'Mercury' on your organizer. *Pause as needed.*

We will write all that is only true about Mercury in this section. *Point to the empty space below Mercury.*

These sections tell us how the Earth and Mercury are different.

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TEACHER AND STUDENTS PRACTICE TASK TOGETHER (continued)

The section that overlaps represents how they are similar or the same. *Point to the word, Same.*

What does the overlapping section tell us?

- It tells us how the Earth and Mercury are the same.

We will write everything that is the same about the Earth and Mercury in this section.

What will we write in the overlapping section?

- We will write everything that is the same about the Earth and Mercury.

Let's return to the chart about the Earth and read the next detail together.

- All planets revolve around the sun.

We already know that Earth is a planet. What does the Earth revolve around?

- It revolves around the Sun.

We also know that Mercury is a planet. What does Mercury revolve around?

- It revolves around the Sun.

Look at the chart about Mercury. Does it tell us if Mercury revolves around the sun?

- no

That's right. It does not tell us this, but we learned about this similarity from the text about the Earth.

So how are Earth and Mercury similar?

- They both revolve around the Sun.

We will write 'revolve around the Sun' in the overlapping section.

What will you write in the overlapping section? *Point to this space.*

- revolve around the Sun

Write on your graphic organizer while I write on mine.

Let's read the next detail on the chart about the Earth.

- Earth is the 3rd planet from the Sun.

What does it tell us about the Earth?

- It is the 3rd planet from the Sun.

Now look at the chart about Mercury. It tells us Mercury's distance from the Sun.

Does it tell us about Mercury's distance from the Sun?

- yes

That's right. It tells us Mercury is the closest planet to the Sun.

We know that Earth is the 3rd planet from the Sun and Mercury is the 1st planet from the Sun. That detail is different for the Earth and Mercury.

Is that detail the same or different?

- different

To show that they are different, we write what is true about Earth in this section (*Point to the empty space below Earth*) and what is true about Mercury in this section (*Point to the empty space below Mercury*).

What will we write in the section for Earth?

- 3rd planet from the Sun

What will we write in the section for Mercury?

- 1st planet from the Sun

Write on your graphic organizer while I write on mine.

Let's read the next detail on the chart about the Earth.

- Earth is warmed by the Sun.

What does it tell us about the Earth?

- It is warmed by the Sun.

Now look at the chart about Mercury. It tells us that Mercury is very hot during the day.

What does it tell us about Mercury?

- It is very hot during the day.

That's right. So, does the Sun warm Mercury or make it very hot?

- It makes it very hot.

Yes, the Earth is warmed by the Sun, but Mercury is made very hot by the Sun. This means Mercury and Earth are different.

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TEACHER AND STUDENTS PRACTICE TASK TOGETHER (continued)

Are Earth and Mercury the same or different?

- different

What will we write in the section for Earth?

- warmed by the Sun

What will we write in the section for Mercury?

- made very hot during the day by the Sun

Write on your graphic organizer while I write on mine.

I can summarize what we've learned about the two topics by using signal words and the graphic organizer as a guide.

To summarize, I would say this:

The Earth and Mercury are planets in the same solar system. They revolve around the Sun. The Earth is the third planet from the Sun but Mercury is the closest to the Sun. This makes Mercury much hotter than the Earth.

STUDENTS PRACTICE TASK

You will continue to compare and contrast the topics in the two texts, "The Earth" and "Mercury."

What do we learn when we compare?

We learn how two things are similar or alike.

What do we learn when we contrast?

We learn how two things are different or not alike.

Where do we write all that is true only about Earth?

under Earth

Where do we write all that is true only about Mercury?

under Mercury

To show how they are similar, where do we write on the graphic organizer?

under Same

Let's look at the chart about the Earth.

Read what it tells us about the Earth.

has an atmosphere.

Look the chart about Mercury. Read what it tells us about an atmosphere on Mercury?

almost no atmosphere

That's right.

Does this make Earth and Mercury the same or different?

different

What is different?

Earth has an atmosphere but Mercury has almost no atmosphere.

That is correct.

What will we write in the section for Earth?

has an atmosphere

What will we write in the section for Mercury?

almost no atmosphere

Write on your graphic organizer while I write on mine.

Read the next detail about Earth.

the atmosphere keeps the Earth warmer at night

Look at the chart about Mercury. Read the next detail about Mercury.

it is very cold at night

Does this make Earth and Mercury the same or different?

different

What is different?

The atmosphere on Earth keeps it warmer at night; however, Mercury is very cold at night.

What will we write in the section for Earth?

the atmosphere keeps it warmer at night

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STUDENTS PRACTICE TASK (continued)

What will we write in the section for Mercury?

it is very cold at night

Write on your graphic organizer while I write on mine.

We learned that the atmosphere on Earth keeps it warm at night. We also learned that Mercury is very cold at night. We can probably say that Mercury is very cold at night because it has almost no atmosphere, even though the text did not specifically say this is the reason it is very cold at night.

This final summary is an example of how a graphic organizer in conjunction with our chart of signal words can assist students when retelling or summarizing a text.

I can summarize what we've learned about the two topics by using signal words and the graphic organizer as a guide.

To summarize, I would say this:

The Earth and Mercury are planets in the same solar system. They revolve around the Sun. The Earth is the 3rd planet from the Sun but Mercury is the closest to the Sun. This makes Mercury much hotter than the Earth. The Earth has an atmosphere that keeps the planet warmer at night; however, Mercury has almost no atmosphere so it gets very cold at night.

For more independent practice with these texts, ask students to use the remaining details on the chart about the Earth (fertile ground and water; plants, animals, and people) and the chart about Mercury (a hard, rocky surface; no plants, animals or people) to compare and contrast the two topics.

INDEPENDENT PRACTICE

When students consistently compare and contrast the topics in different texts, provide individual turns using other explicit passages.

SCAFFOLDING SUGGESTION FOR ERRORS

Verify that students are correctly identifying the parts of the graphic organizer and how to compare and contrast the details about the topics. If students are experiencing difficulty with this concept, create two charts about something that is familiar to the students (two children in the classroom) to use with the graphic organizer.

Adaptations using this Instructional Routine:

- If students are not able to read the details on the chart during Student Practice Task, the teacher should read and point to the details while the students look and listen.
- Use texts at the appropriate readability for students to practice comparing and contrasting two topics independently while using a similar graphic organizer, or a Venn diagram to write down similarities and differences. Let students take turns sharing their graphic organizers with important points to the rest of the class, or with a partner.
- Once students compare/contrast topics in two other texts, have them practice using their completed graphic organizers to retell the main points about the topics.
- Use this routine's structure to compare and contrast story grammar elements between two texts.

For further independent practice, refer to the following Second and Third Grade FCRR Student Center Activities:

For finding details in a text: http://www.fcrr.org/Curriculum/PDF/G2-3/2-3Comp_2.pdf

- C.012
- C.013
- C.014
- C.015

For Compare and Contrast: http://www.fcrr.org/Curriculum/PDF/G2-3/2-3Comp_3.pdf

- C.021

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Topic: _____

Topic: _____

Same

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Topic: Earth

Topic: Mercury

Same

planet

part of solar
system