2.1: Investigating Landforms on Venus
1. What would you add to the diagram to better show Claire’s idea?
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The diagram is missing the sun. That’s how the water heated up enough to evaporate.
If flowing water formed the channel, then Mars once had the liquid water needed to support life.

**Claim 1:**
Flowing water formed the channel on Mars.

**Claim 2:**
Flowing lava formed the channel on Mars.
Possible Answers To Include:

- Flowing water, flowing lava, and unsure are acceptable answers, your claim should be supported by evidence that is explained with reasoning.

- Example:
  - I can look at the flowing lava image and see how it is similar and different from the channel on Mars. I’m not sure, but I think maybe it was formed by flowing lava because the channel on Mars looks narrow, and the landform made by flowing lava seems more narrow than the one formed by flowing water.
How can we gather more evidence about whether lava or water formed the channel on Mars?

There is a need for more evidence to figure out whether flowing water or flowing lava formed the channel on Mars.

We will think about ways scientists can gather evidence about processes that are difficult to observe, such as those on other planets.
In the article, a scientist observed interesting landforms on Venus and developed a way to get evidence about the process that created them.

We will apply what we learn to understand how we can gather more evidence about whether lava or water formed the channel on Mars.
Scientists read a lot – they read carefully and critically to be sure they understand the ideas presented.

Other investigations and to learn more about topics in science.

What is Active Reading?

Science texts can be difficult to read, containing words and concepts that may be new or complicated.

That’s why it’s especially important to read deeply and carefully.

Active Reading is an approach to reading science texts, which is similar to how scientists read.

This approach is called Active Reading because you will think very deeply as you read, so you can actively try to understand what you are reading.

Think about a time when they were doing the opposite of Active Reading.

Raise your hand if you have ever experienced a time when you read something for class but realized you didn’t actually remember or didn’t try to really understand what you were reading.

Discuss why you think this happens - Be ready to share your experiences with the class.

Reading without paying attention or understanding what is read is actually very common.

We want you to read actively so that you can understand the ideas being presented.
Annotating a text means recording your own thinking as you read. This practice helps readers keep track of what they are thinking and helps them remember the ideas and concepts they are reading.
I am going to use this image to help me understand what novae are.

I am starting to be able to picture these novae; I see that they are round landforms found all over the surface of Venus. But, I am still not sure how big they are.
When you highlight challenging words, or record questions or connections, or think deeply about the article—you are creating a record of your thinking as you read.

These annotations show that I was paying attention to my own understanding as I read, which is an important habit to learn.

Do not worry about writing perfect or complete sentences with correct spelling.

Your annotations should just reflect your thinking in the moment.
Active Reading Guidelines

1. Think carefully about what you read. Pay attention to your own understanding.

2. As you read, annotate the text to make a record of your thinking. Highlight challenging words and add notes to record questions and make connections to your own experience.

3. Examine all visual representations carefully. Consider how they go together with the text.

4. After you read, discuss what you have read with others to help you better understand the text.

Partner discussions after reading
• When finished you will share one or two annotations with a partner.

• Make sure that you record a few specific, thoughtful questions that you can discuss with a partner after you read.

Begin reading and annotating “Investigating Landforms on Venus.”

The link is located under 2.1.3
Reviewing Annotations

1. Look over your annotations on the “Investigating Landforms on Venus” article. Pick one or two of your annotations to share with a partner. Then, edit them and add #share.

2. Discuss the tagged annotations with your partner. After you have discussed the annotations with your partner, edit these annotations by changing the tag to #discussed.

3. Now, choose one of the questions or connections you already discussed or a different question or connection that you still want to discuss with the class. Edit the annotation and add #present.
Discussing Annotations

#share

Carefully choose an interesting annotation (comment, question, connection, vocabulary word) you’d like to share with your partner and add #share to this annotation.

#discussed

Add #discussed to your annotation if you feel that you and your partner have resolved a question OR if your discussion gave you a deeper understanding about something in the article.

#present

Add #present to your annotation to mark any unresolved questions or ideas you would like to present to the class.
Discussing Annotations

Rate how successful you were at using Active Reading skills by responding to the following statement:

As I read, I paid attention to my own understanding and recorded my thoughts and questions.

- Never
- Almost never
- Sometimes
- Frequently/often
- All the time

2.1.4: Annotations and Reflection.
2.1.5: (Activity 5)

The Chapter 2 Question is: *How can we gather more evidence about whether lava or water formed the channel on Mars?*

One challenge in studying the channel on Mars is that Mars is too far away for scientists to directly observe what happens there.

Based on what you learned about Gerya in the article you read today, how can scientists study Mars if they can’t directly observe what is happening there?
The Chapter 2 Question is: *How can we gather more evidence about whether lava or water formed the channel on Mars?*

One challenge in studying the channel on Mars is that Mars is too far away for scientists to directly observe what happens there.

Based on what you learned about Gerya in the article you read today, how can scientists study Mars if they can't directly observe what is happening there? Scientists can make computer models or physical models of Mars to test their ideas. They can run the models and compare the results to the data we are able to collect from Mars (such as satellite images).