



Chalk Talks in Mathematics

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18.704
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Writing,
Rhetoric,
And
Professional
Communication

What were some of the **challenges** you faced in presenting in this class?

Today we will discuss how to give an
effective chalk talk
so that you are
prepared
for your next one.

Let's start with
what we already **know**...

Skills I Saw in Your First Presentations



Starting with definitions



Stating the question / problem



Stating goal



Checking for audience understanding





Establishing the value of ideas

We want to build on your
strengths this semester.



But we also want to
acknowledge and work on areas
for **growth**.



Let's start working on areas for **growth** by asking,
“Why is giving a **seminar presentation** a generally **difficult**  **Problem** ?”





In order to understand this



we need to identify the
variables involved and
how they **relate** to one another.





Problem

First, there's **you**.

You have a **purpose**:
communicate ideas
about **finite groups**.

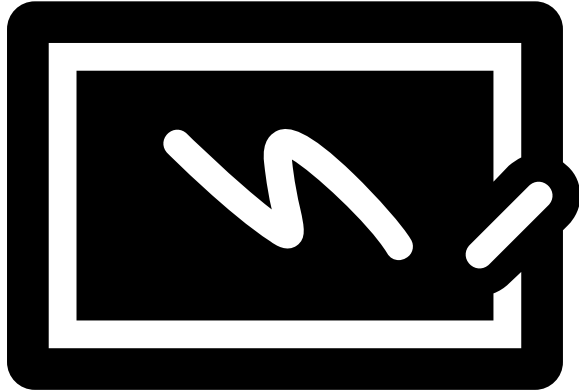


You



Problem

And you gotta do this through a **chalk talk**.



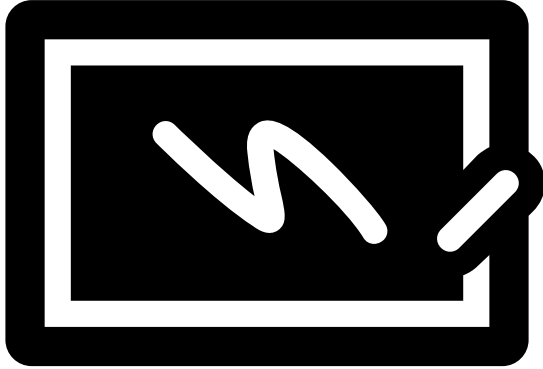
**Chalk
Talk**



You



Problem

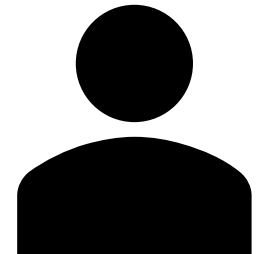
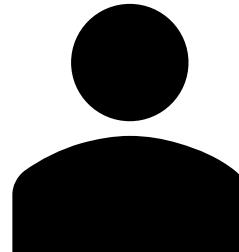
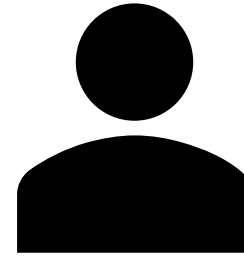


Chalk
Talk



You

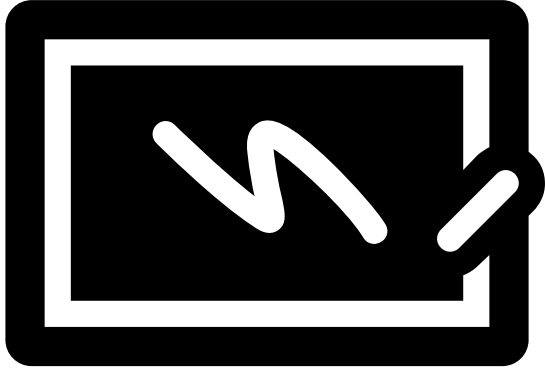
Classmates



And you have to
communicate the ideas
so that your **classmates**
understand them.



Problem



Chalk
Talk

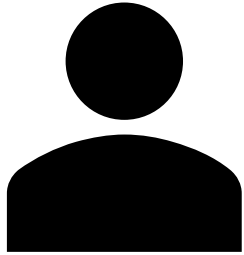


You

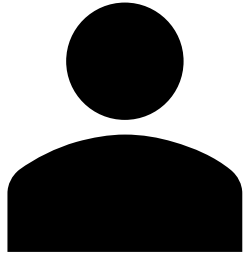
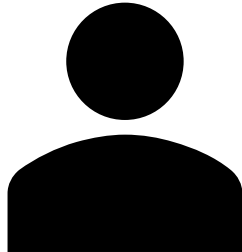
Finite Groups:
An Introduction
Jean-Pierre Serre
Collège de France, Paris



Classmates



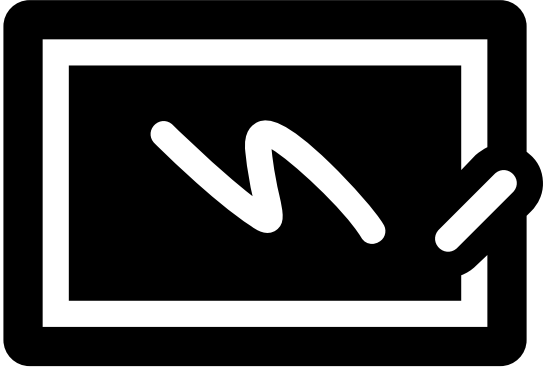
But **before** you can do
that...



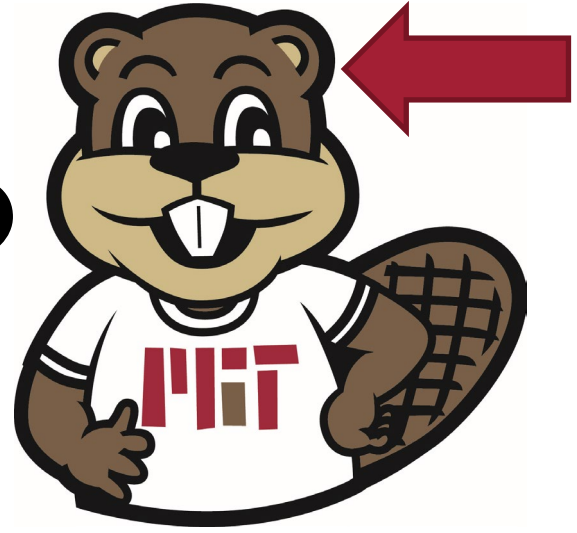


Problem

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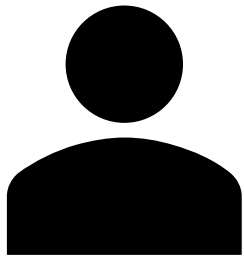
Chalk
Talk



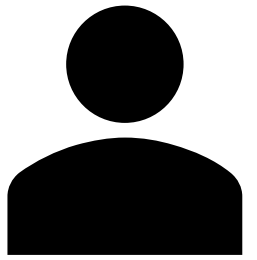
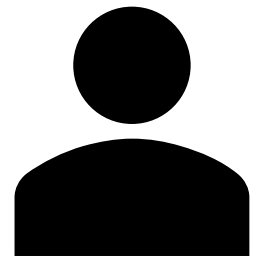
You



Classmates

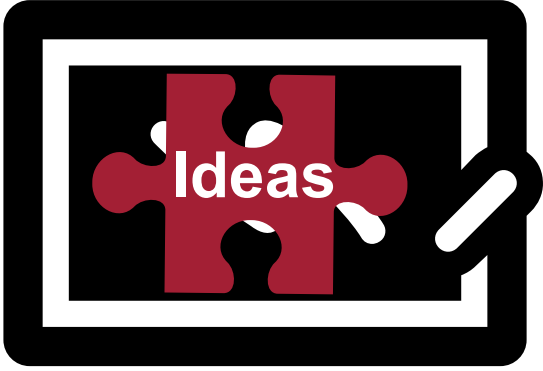


You have to
understand the ideas.





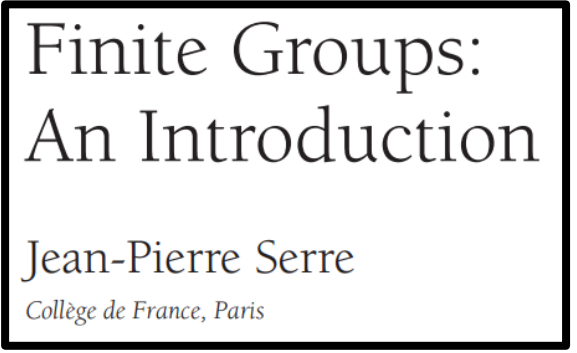
Problem



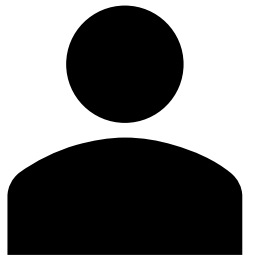
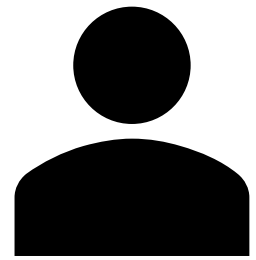
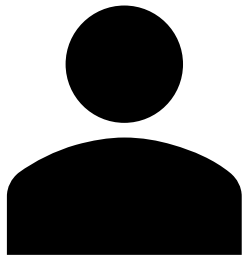
Chalk
Talk



You



Classmates

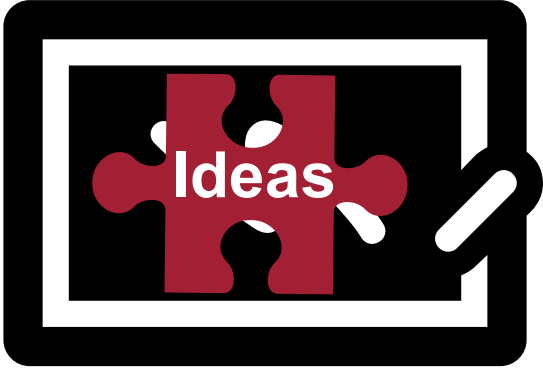


And you then have to find a way to **translate** these **ideas** into a **chalk talk**.



Problem

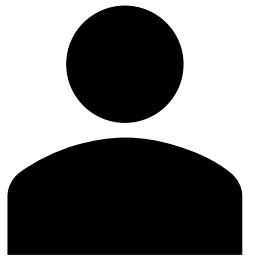
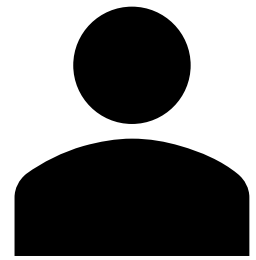
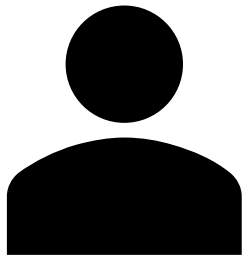
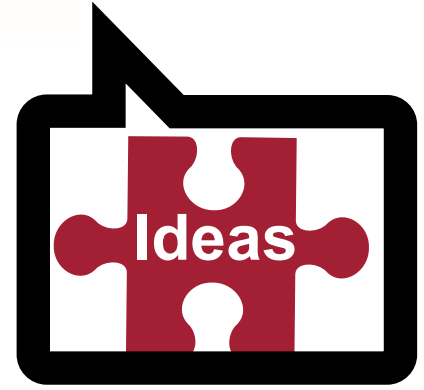
Finite Groups:
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Classmates

Chalk
Talk

You



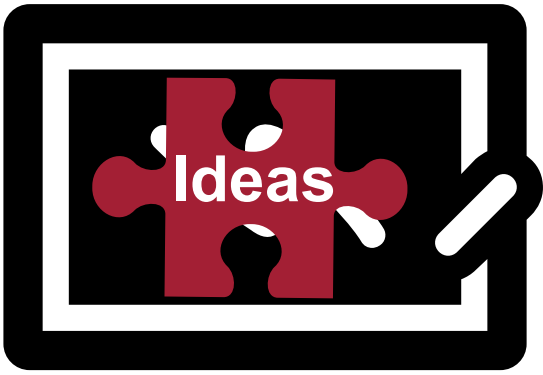
And you have to **translate** those **ideas** into your own **words** that you will **speak** to your **classmates**.



Problem

Finite Groups:
An Introduction
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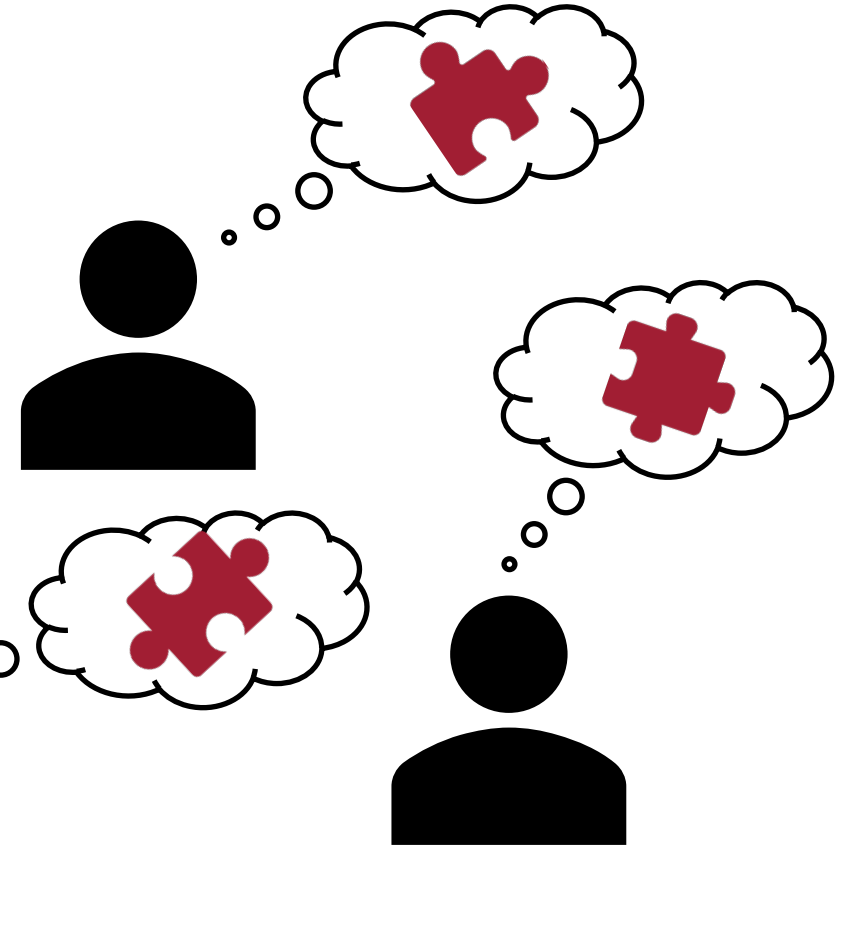
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Chalk
Talk



You



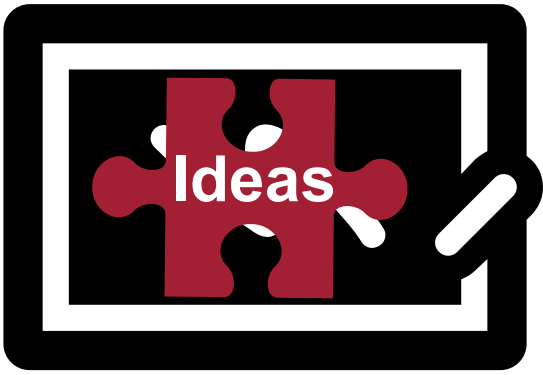
But you also have to consider your **classmates' varied background knowledge, interests, and needs.**



Problem

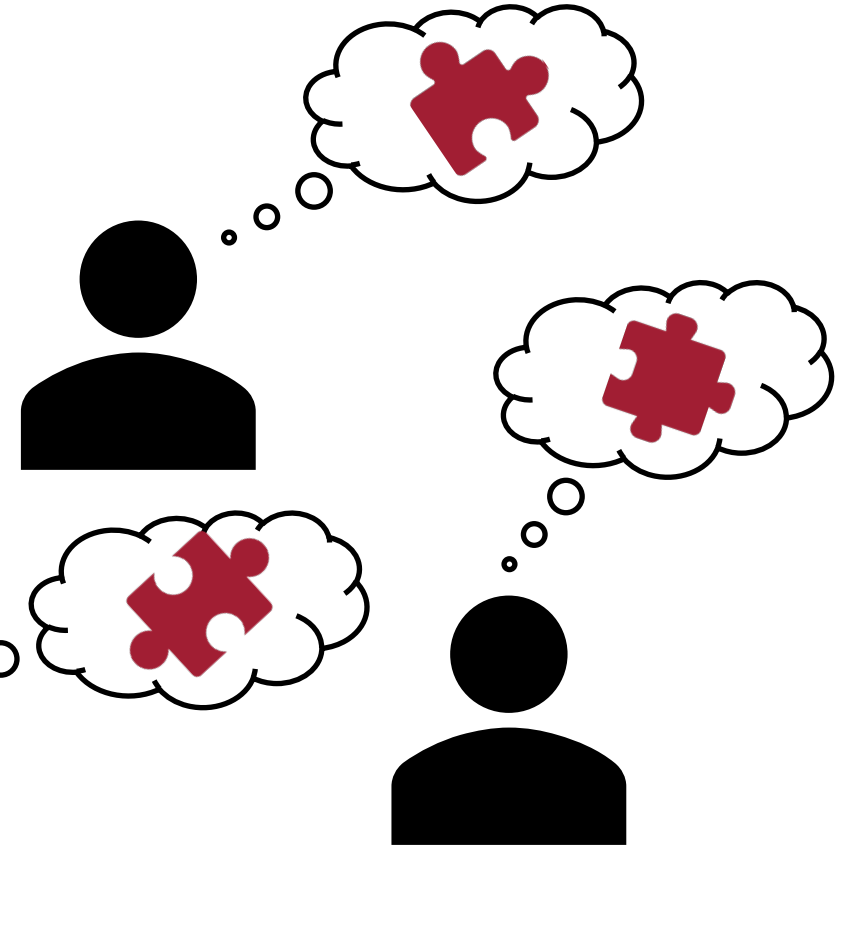
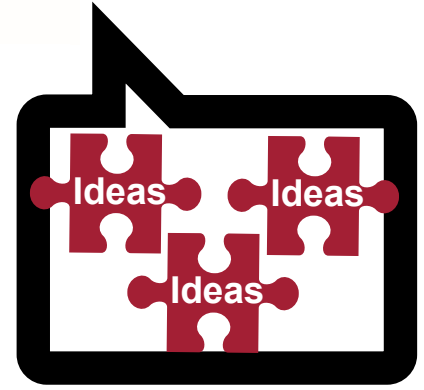
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Chalk Talk

You



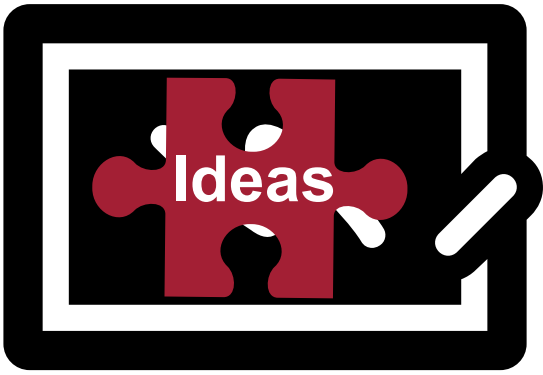
And your **purpose** is to somehow get the **ideas** as you **understand** them to fit into the **puzzle** of **background knowledge, interests, and needs** in your **classmates'** minds.



Problem

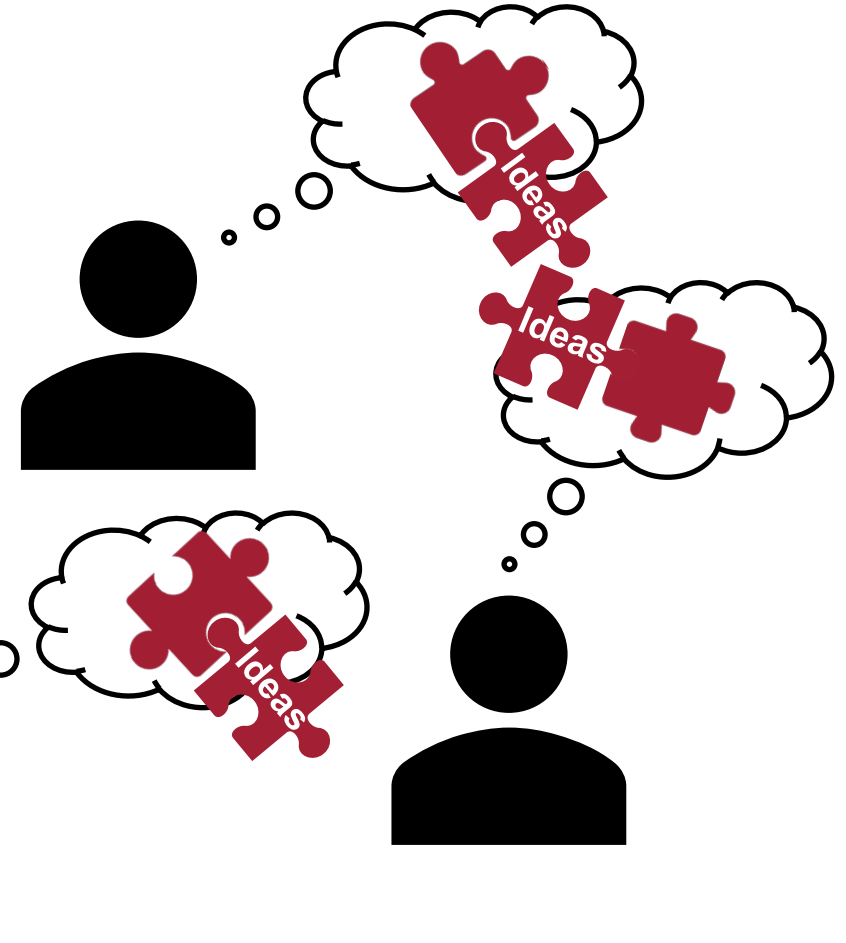
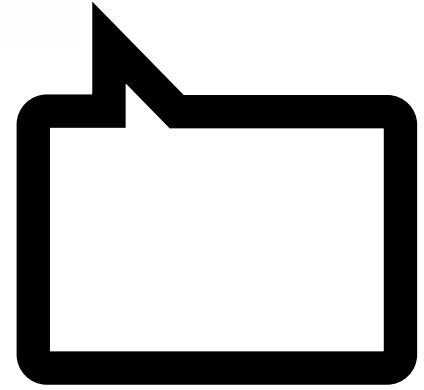
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Chalk Talk

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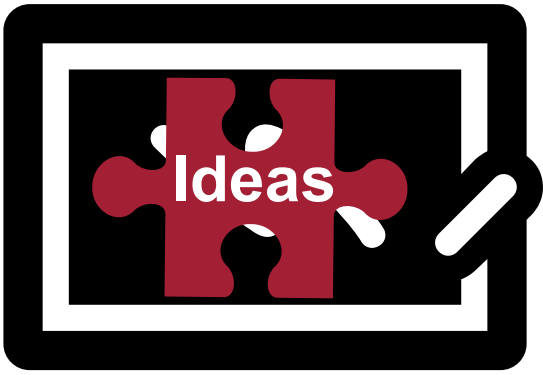
And your **purpose** is to somehow get the **ideas** as you **understand** them to fit into the **puzzle** of **background knowledge**, **interests**, and **needs** in your **classmates'** minds.



Problem

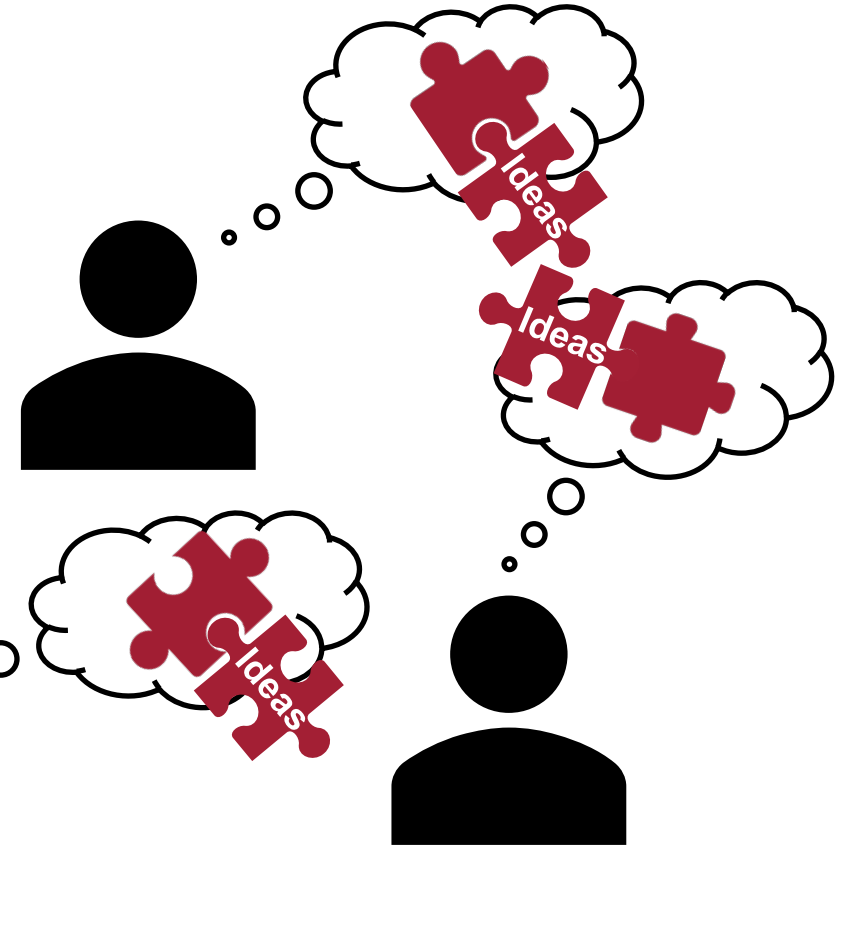
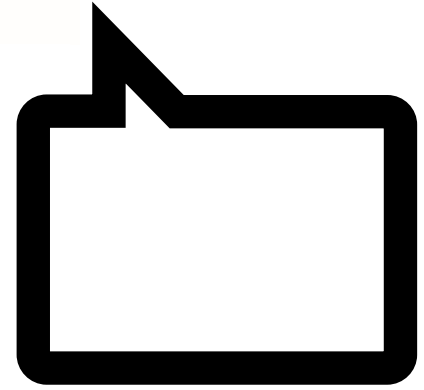
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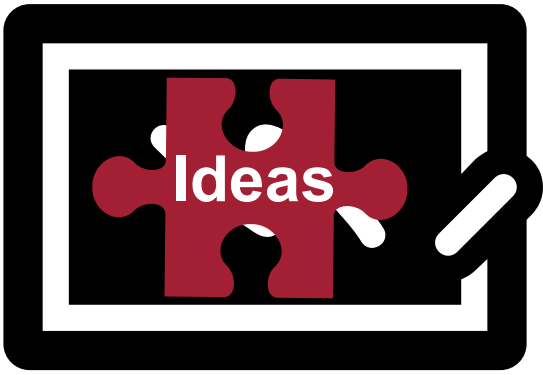
This is a
difficult
problem.



Problem

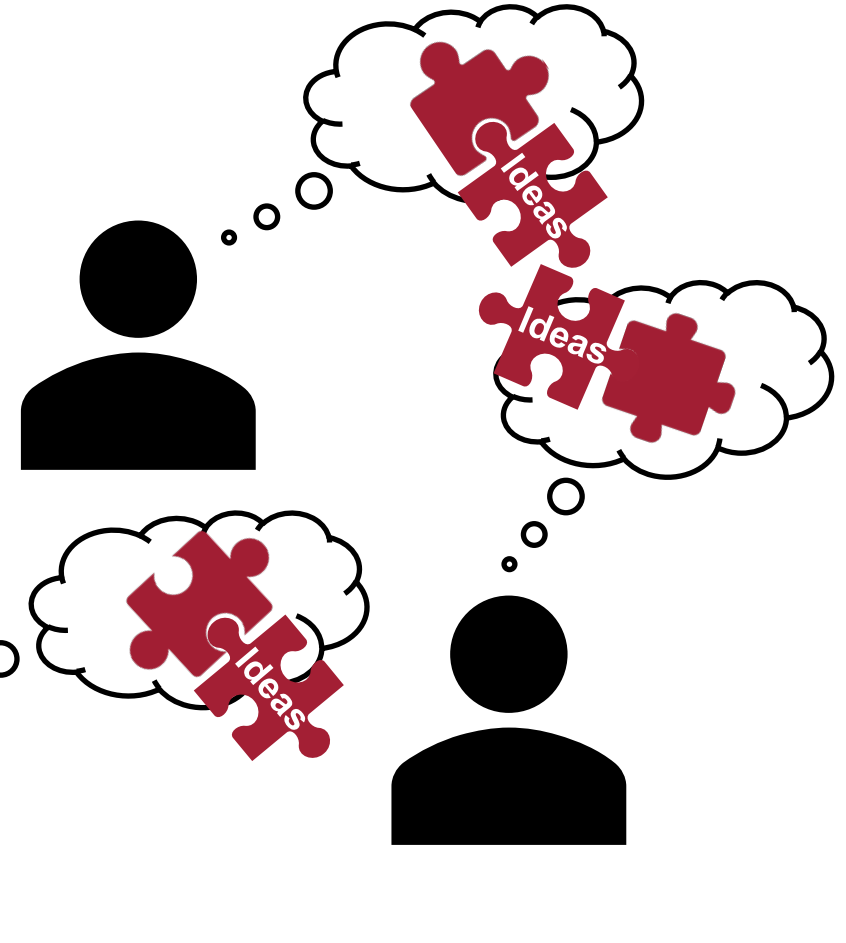
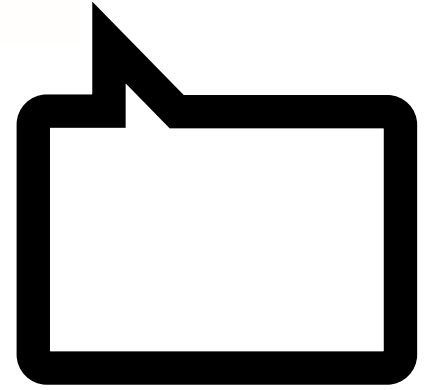
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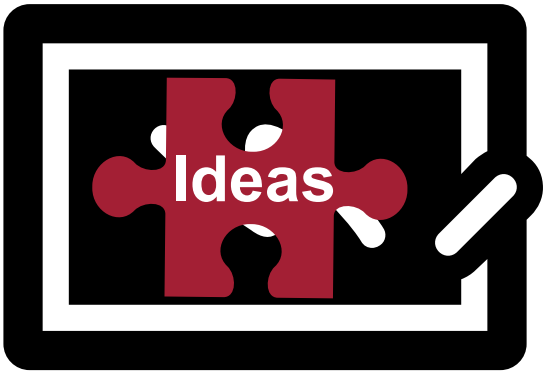
It can't currently be **solved** with **certainty**.



Problem

Finite Groups:
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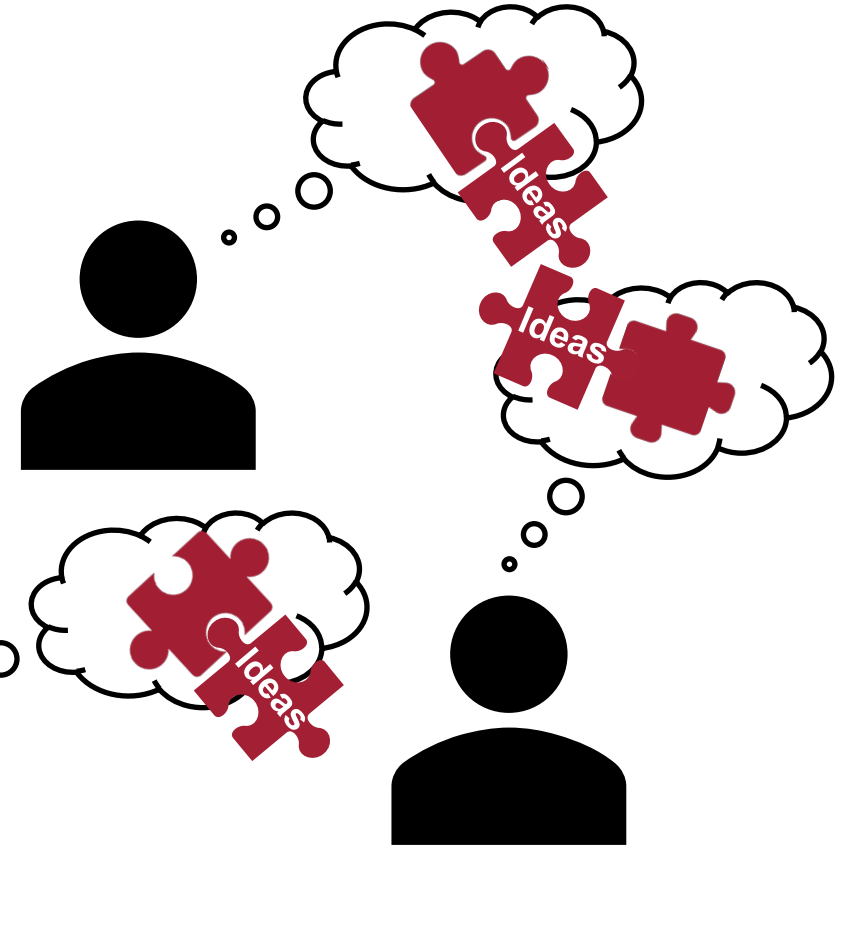
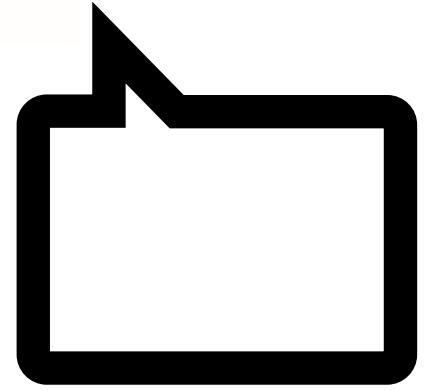
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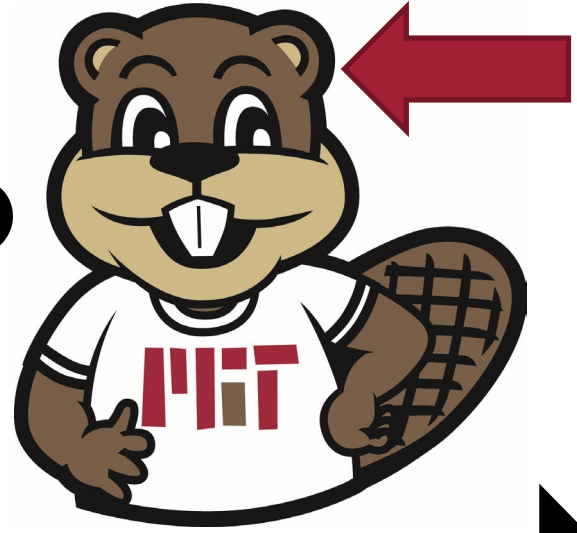
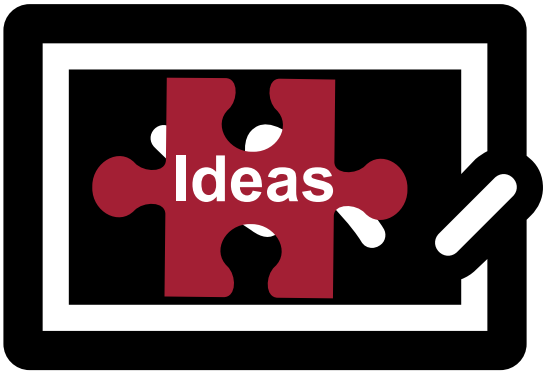
But we do have **models** from **rhetoric** and **linguistics** that we can use to **understand** the **variables**.



Problem

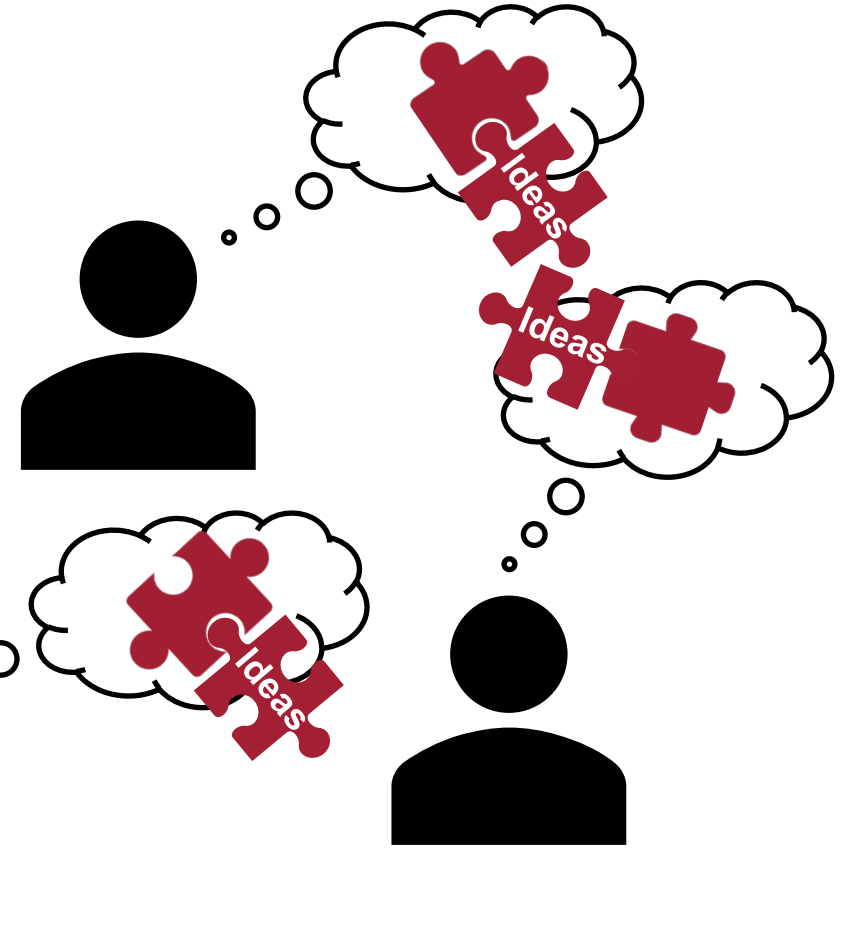
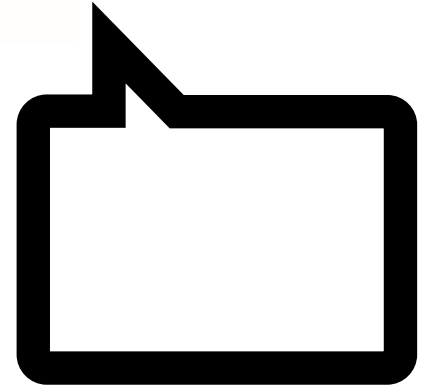
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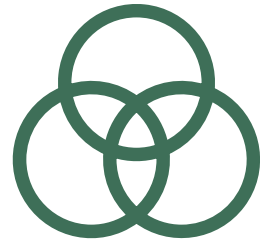


And if we can understand the **variables** by using these **models**, we can **design** **chalkboards** and **speech** that **increase** our **chances** of succeeding in our **purpose**.

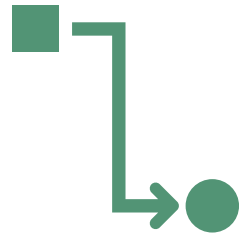




Solution



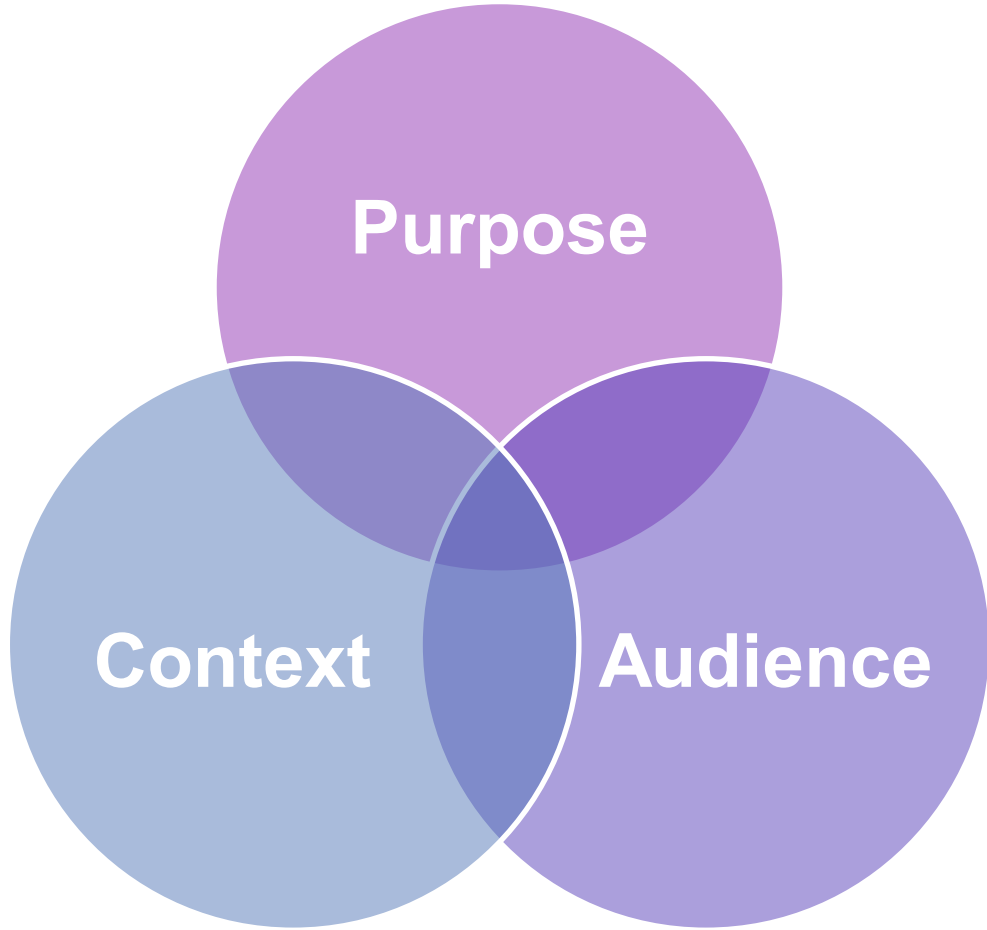
Rhetorical Situation



Writing Process



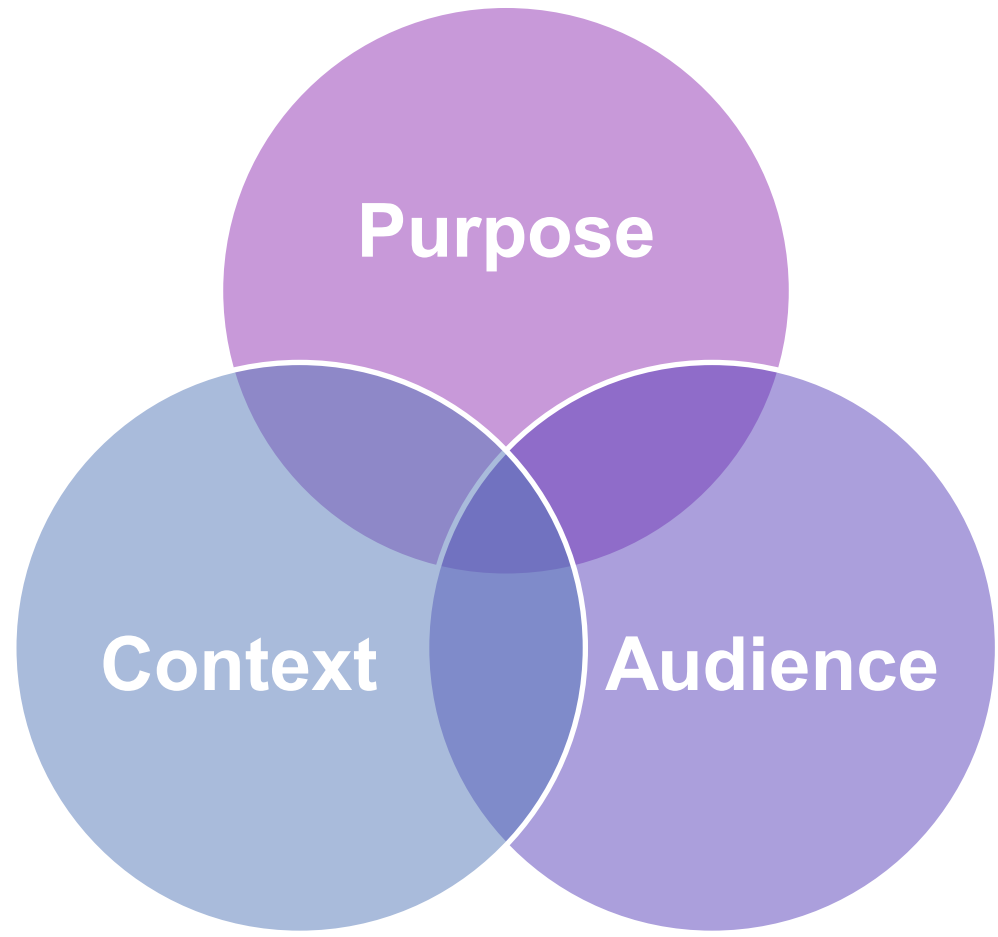
Rhetorical Situation





Rhetorical Situation

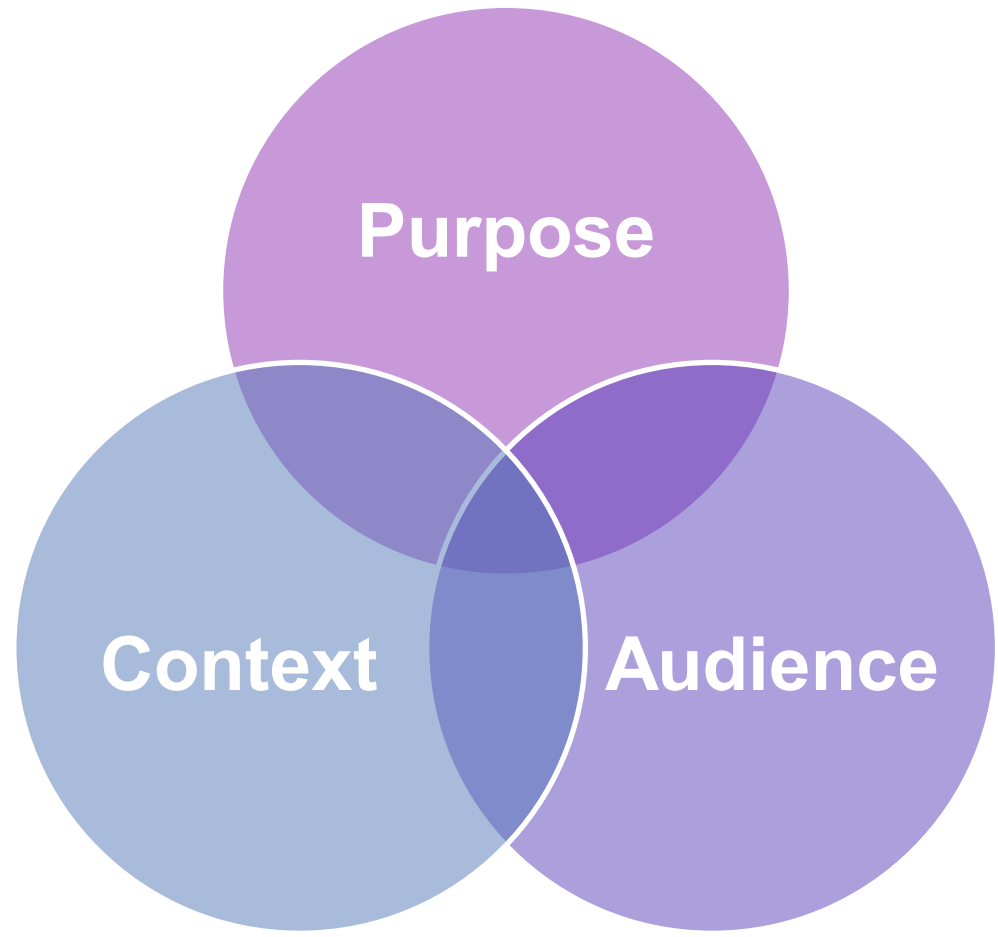
We call this **model** the **Rhetorical Situation**.





Rhetorical Situation

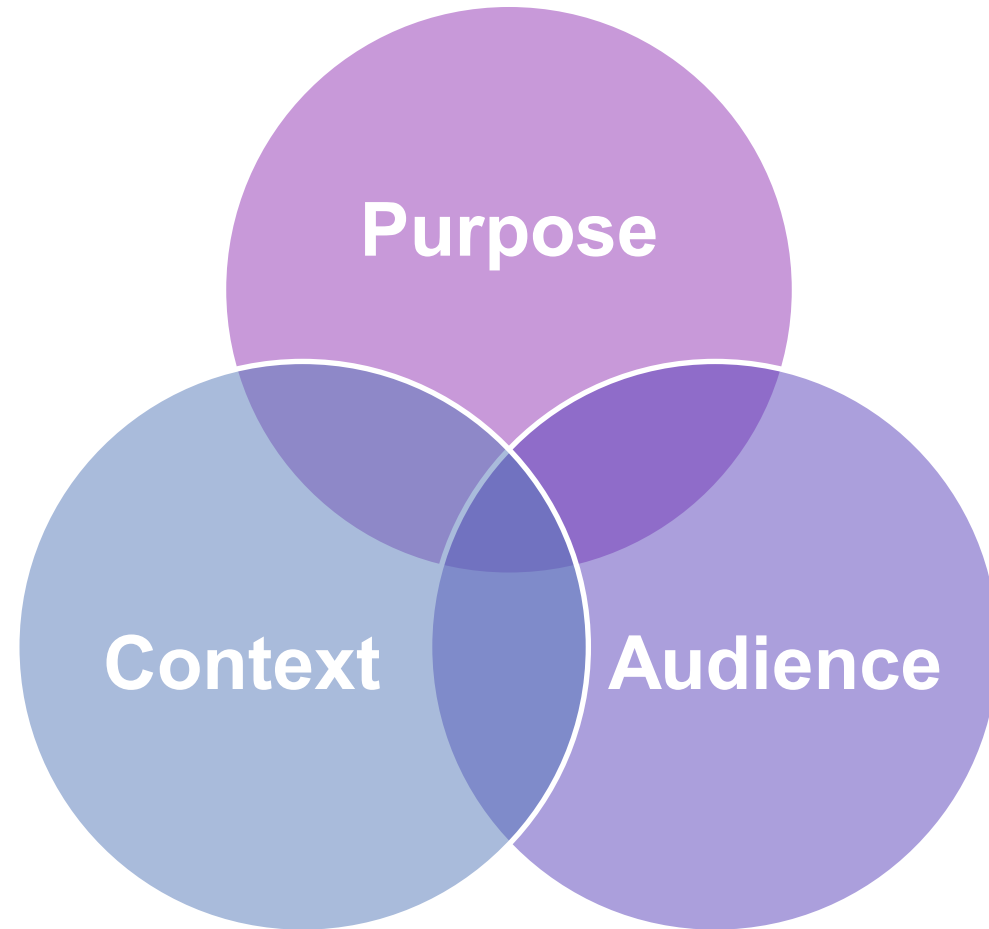
Rhetoric is the study of **communication & persuasion.**





Rhetorical Situation

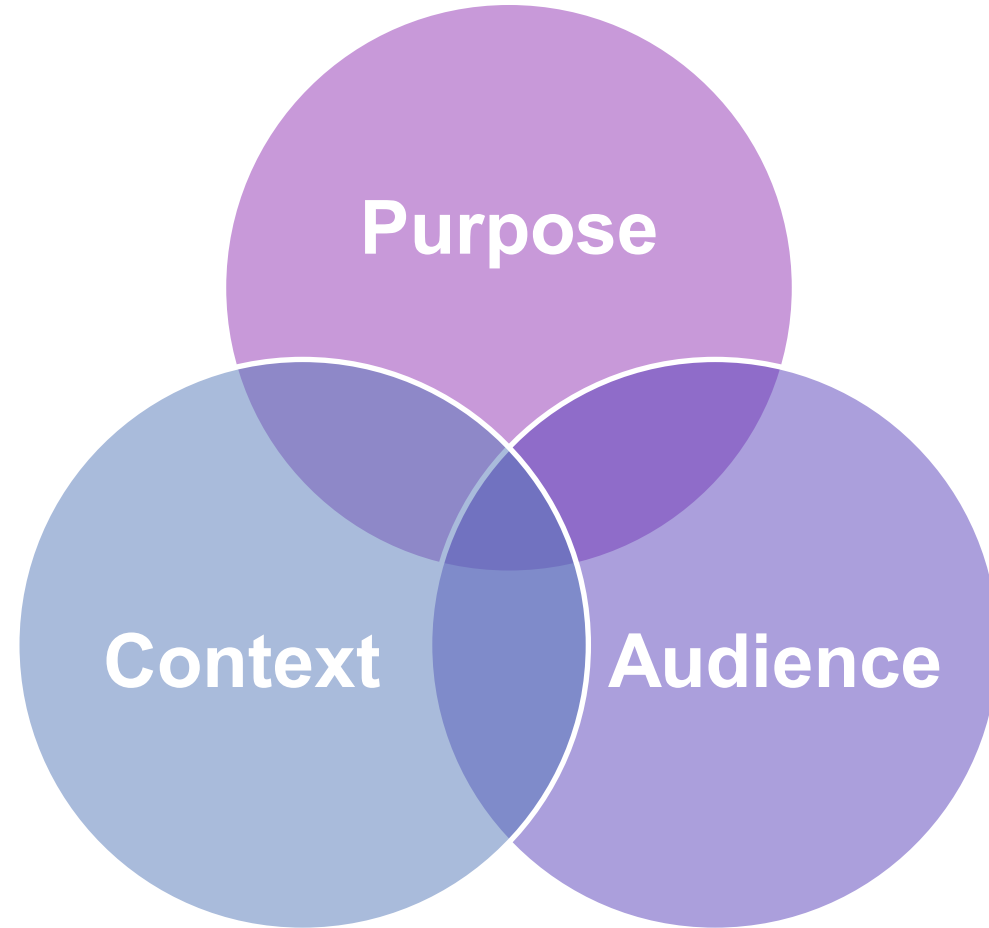
So any **situation** that calls for **communication** is a **rhetorical situation**.





Rhetorical Situation

And since a **seminar presentation** calls for **communication**, we can use the **rhetorical situation** model to **understand** it better and make more **effective design decisions**.





Rhetorical Situation

We can do a **basic analysis** of these **variables** in our **rhetorical situation** relatively quickly.

Context

Audience

Purpose



Rhetorical Situation

We can do a **basic analysis** of these **variables** in our **rhetorical situation** relatively quickly.

Learning
Seminar

Audience

Purpose



Rhetorical Situation

We can do a **basic analysis** of these **variables** in our **rhetorical situation** relatively quickly.

Learning
Seminar

Classmates

Purpose



Rhetorical Situation

We can do a **basic analysis** of these **variables** in our **rhetorical situation** relatively quickly.

Learning
Seminar

Classmates

Help
Classmates
Understand
Material



Rhetorical Situation

This is a **basic analysis** of the **rhetorical situation** for **seminar presentations**.

Learning
Seminar

Classmates

Help
Classmates
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Material



Rhetorical Situation

This **analysis** can help us make **decisions** about how to **design** our presentation to help us accomplish our **purpose** for our **audience** in our **context**.

Learning
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Classmates

Help
Classmates
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Material



Rhetorical Situation

It's a **powerful** tool.

Learning
Seminar

Classmates

Help
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Rhetorical Situation

But if we can understand the **rhetorical situation even better**, we can make even more **effective design choices**.

Learning
Seminar

Classmates

Help
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Material



Rhetorical Situation

But in order to understand the **rhetorical situation better**, we need to do a more **complex analysis**.

Learning
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Classmates

Help
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Rhetorical Situation

Context

- Where are the ideas conceptually located in the seminar & theory?
- What medium am I using?
- What can it do?
- What can't it do?
- How do I manage speed?
- How do I manage volume?

Audience

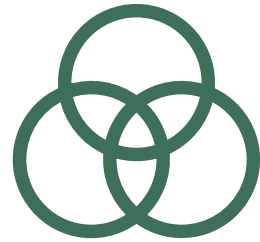
- What is their background knowledge?
- What are they interested in?
- What do they need to know?

Purpose

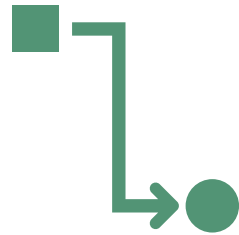
- What are the goals of the assignment?
- What are my goals as a classmate?
- What are my goals as a student?



Solution



Rhetorical Situation

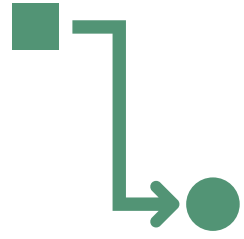


Writing Process

Learning Seminar

Classmates

Help Classmates Understand Material



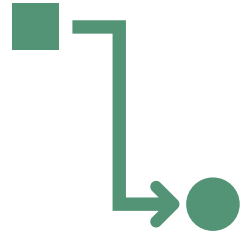
Writing Process

We can use the **rhetorical situation** to help us generate **useful questions** for making **decisions** in our **writing process**.

Learning
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Help
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Understand
Material



Writing Process

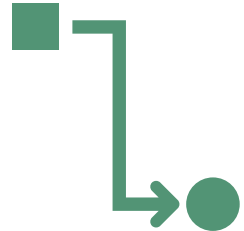


Learn
the
Content

Learning
Seminar

Classmates

Help
Classmates
Understand
Material



Writing Process



Learn the Content



Focus

Learning Seminar

Classmates

Help Classmates Understand Material



Writing Process



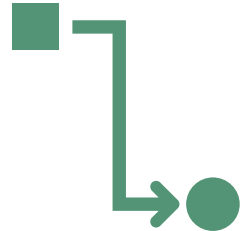
Focus

- What ideas are **hard** or **complex**?
- Why should your classmates **care**?
- How does it **fit** into the overall class?

Help
Classmates
Understand
Material

Classmates

Learning
Seminar



Writing Process



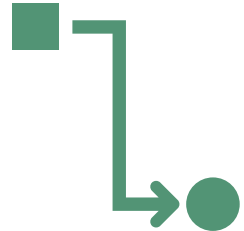
**Learn
the
Content**

Focus

**Learning
Seminar**

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**Help
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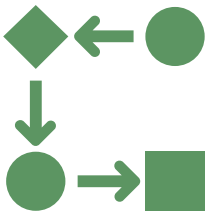
Writing Process



**Learn
the
Content**



Focus



Structure

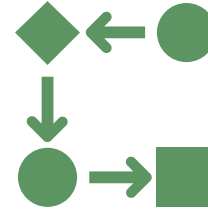
**Learning
Seminar**

Classmates

**Help
Classmates
Understand
Material**



Writing Process



Structure

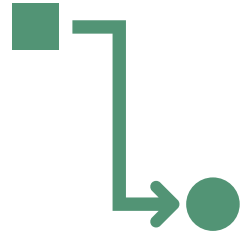
- How can you **organize** the information to help your **classmates** to **understand** the material?



Classmates



Help
Classmates
Understand
Material



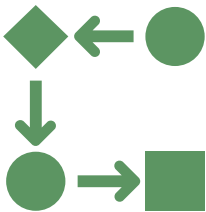
Writing Process



**Learn
the
Content**



Focus

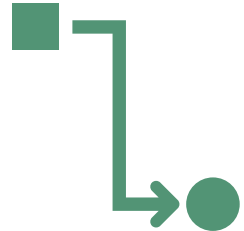


Structure

**Learning
Seminar**

Classmates

**Help
Classmates
Understand
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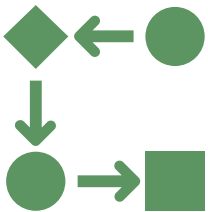
Writing Process



**Learn
the
Content**



Focus



Structure

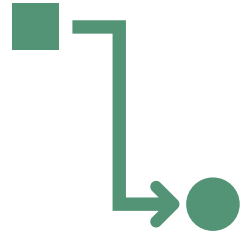


Outline

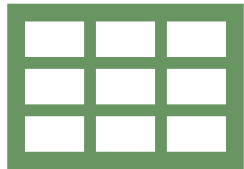
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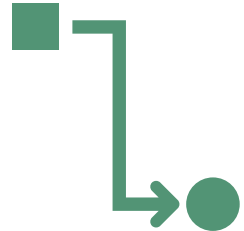
Outline

- What information can I fit on a section of a board?

Learning Seminar

Classmates

Help Classmates Understand Material



Writing Process



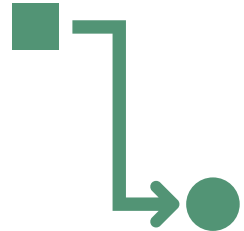
Outline

- What **information** can I fit on a **section** of a **board**?
- How can I help a **confused** or **distracted** classmate?

Learning Seminar

Classmates

Help Classmates Understand Material



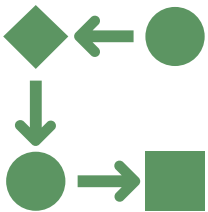
Writing Process



**Learn
the
Content**



Focus



Structure

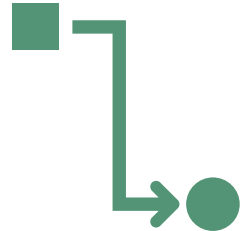


Outline

**Learning
Seminar**

Classmates

**Help
Classmates
Understand
Material**



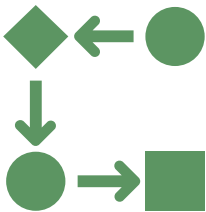
Writing Process



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Focus



Structure



Outline

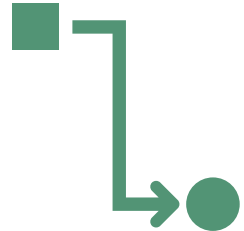


Practice

**Learning
Seminar**

Classmates

**Help
Classmates
Understand
Material**



Writing Process



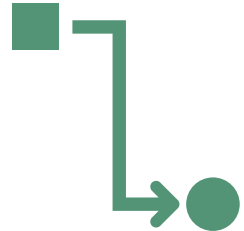
Practice

- Schedule a **rehearsal** with Kent, Michael, WCC, and/or classmates to receive feedback.

Learning Seminar

Classmates

Help Classmates Understand Material



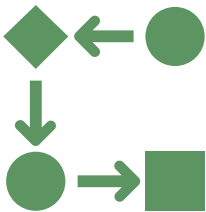
Writing Process



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Outline

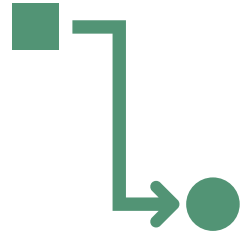


Practice

**Learning
Seminar**

Classmates

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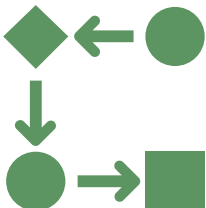
Writing Process



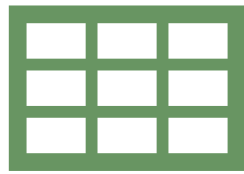
**Learn
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Content**



Focus



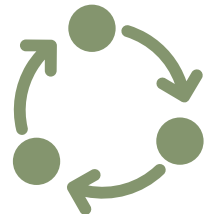
Structure



Outline



Practice

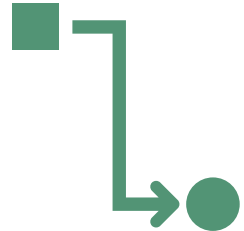


Revise

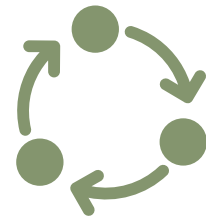
**Learning
Seminar**

Classmates

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Writing Process



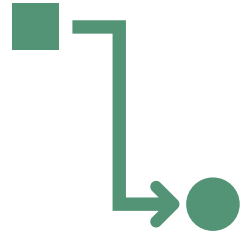
Revise

- Leave enough **time** before your talk so you can **revise** based on feedback.

Learning Seminar

Classmates

Help Classmates Understand Material



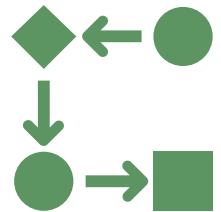
Writing Process



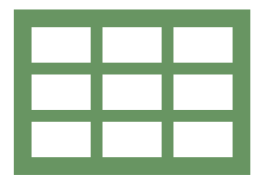
**Learn
the
Content**



Focus



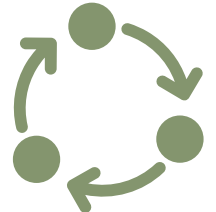
Structure



Outline



Practice

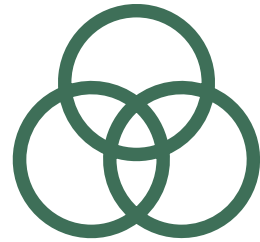


Revise

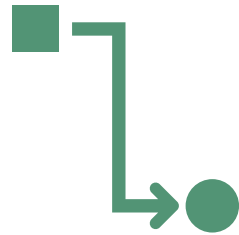
**Learning
Seminar**

Classmates

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Material**



Rhetorical Situation



Writing Process

Schedule a Rehearsal

bit.ly/Maune