



The Concept Comparison Routine

The Content Enhancement Series

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Content Enhancement



A way of teaching an academically diverse group of students in which:

- Both group and individual needs are valued and met;
- The integrity of the content is maintained;

Content Enhancement



A way of teaching an academically diverse group of students in which:



- Critical features of the content are selected and transformed in a manner that promotes student learning; and



- Instruction is carried out in a partnership with students.



Guidebooks in the Content Enhancement Series



- Routines for planning and leading learning
 - Course Organizer Routine
 - Unit Organizer Routine
 - Lesson Organizer Routine

Guidebooks in the Content Enhancement Series



- Routines for exploring text, topics, and details



- Clarifying Routine

- Framing Routine



- Survey Routine

- The ORDER Routine



Guidebooks in the Content Enhancement Series



- Routines for teaching concepts
 - Concept Anchoring Routine
 - Concept Comparison Routine
 - Concept Mastery Routine

Guidebooks in the Content Enhancement Series



- Routines for enhancing performance
 - Quality Assignment Routine
 - Question Exploration Routine
 - Recall Enhancement Routine
 - Vocabulary LINCing Routine

Understanding the Challenge of Diversity



- Introduction of difficult but important concepts requires creating connections to background knowledge.
- Increased student diversity results in varying levels and types of background knowledge.

Understanding the Challenge of Diversity



- Students need new ways of thinking about critical concepts and relationships between concepts.
- Teachers can take advantage of student diversity by comparing concepts from different perspectives.

Responding to the Challenge



The Concept Comparison Routine helps students to:



- Focus on key concepts.



- Focus attention on similarities and differences between known concepts.



- Understand the usefulness of higher-order categories in understanding and learning.



Responding to the Challenge



The Concept Comparison Routine helps students to:



- Develop ways to explain and summarize similarities and differences between concepts.



- Remember a way to compare and contrast known concepts.



Responding to the Challenge



The Concept Comparison Routine helps students to:



- Interact with the teacher and other students to explore and understand relationships between concepts.



- Record information for later studying and use.



The Comparison Table Teaching Device



Is a visual device that:



- is used under teacher guidance;



- focuses careful attention on more than one concept;



- identifies relevant features of each concept;



The Comparison Table Teaching Device



Is a visual device that:



- prompts analysis of similarities and differences of relevant features;



- helps students summarize relationships between concepts;



- helps identify higher-order categories related to the relevant concepts;



The Comparison Table Teaching Device



Is a visual device that:



- is designed to enhance student...



- understanding of concept relationships,
- remembering of ways to think about new, difficult information,
- responses to evaluation tasks and activities, and
- belief in the value of the content.



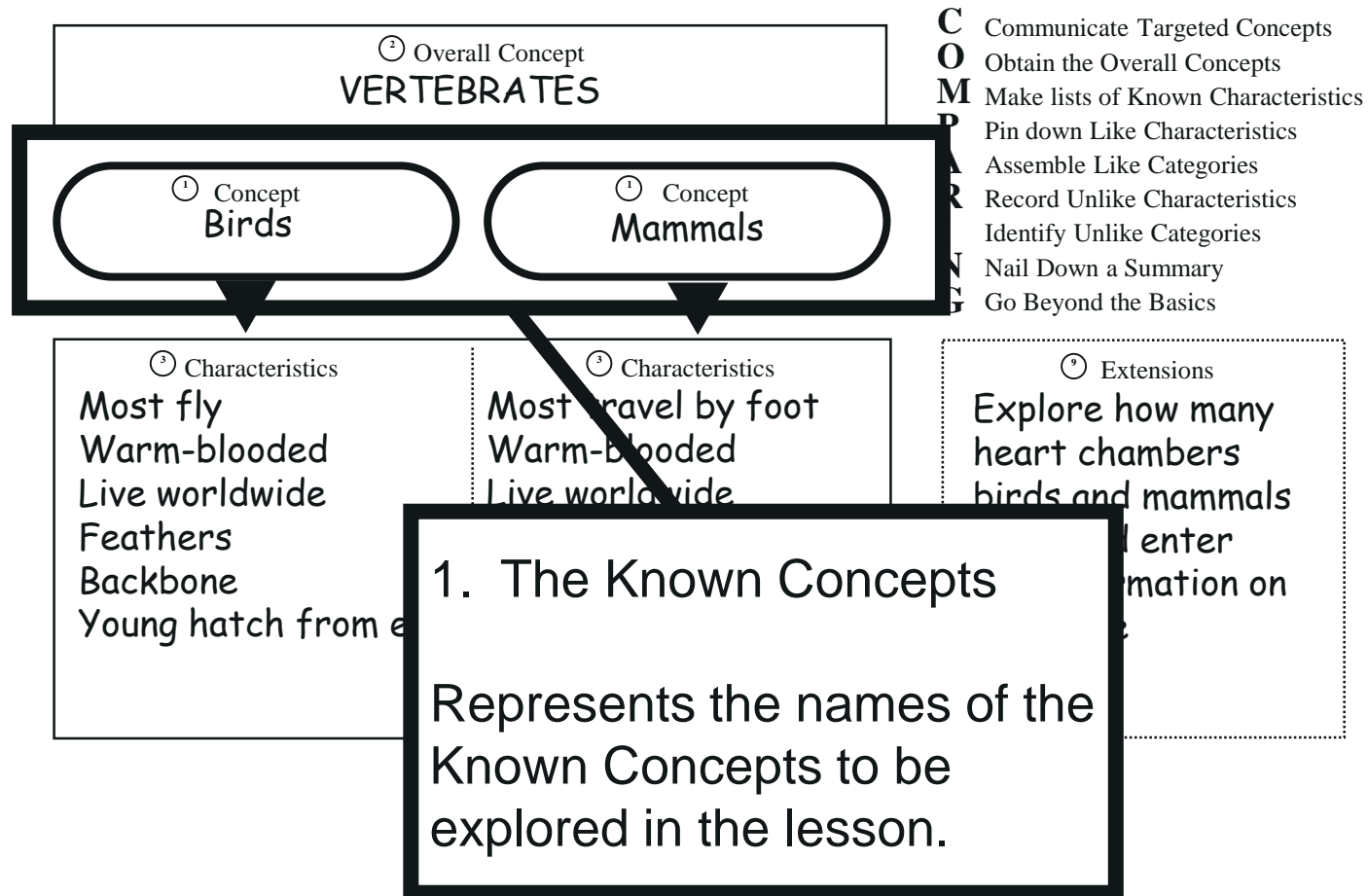
Comparison Table

② Overall Concept		C Communicate Targeted Concepts O Obtain the Overall Concepts M Make lists of Known Characteristics P Pin down Like Characteristics A Assemble Like Categories R Record Unlike Characteristics I Identify Unlike Categories N Nail Down a Summary G Go Beyond the Basics	
① Concept	① Concept		
③ Characteristics	③ Characteristics		② Extensions
④ Like Characteristics			⑤ Like Categories
⑥ Unlike Characteristics	⑥ Unlike Characteristics		⑦ Unlike Categories
⑧ Summary			

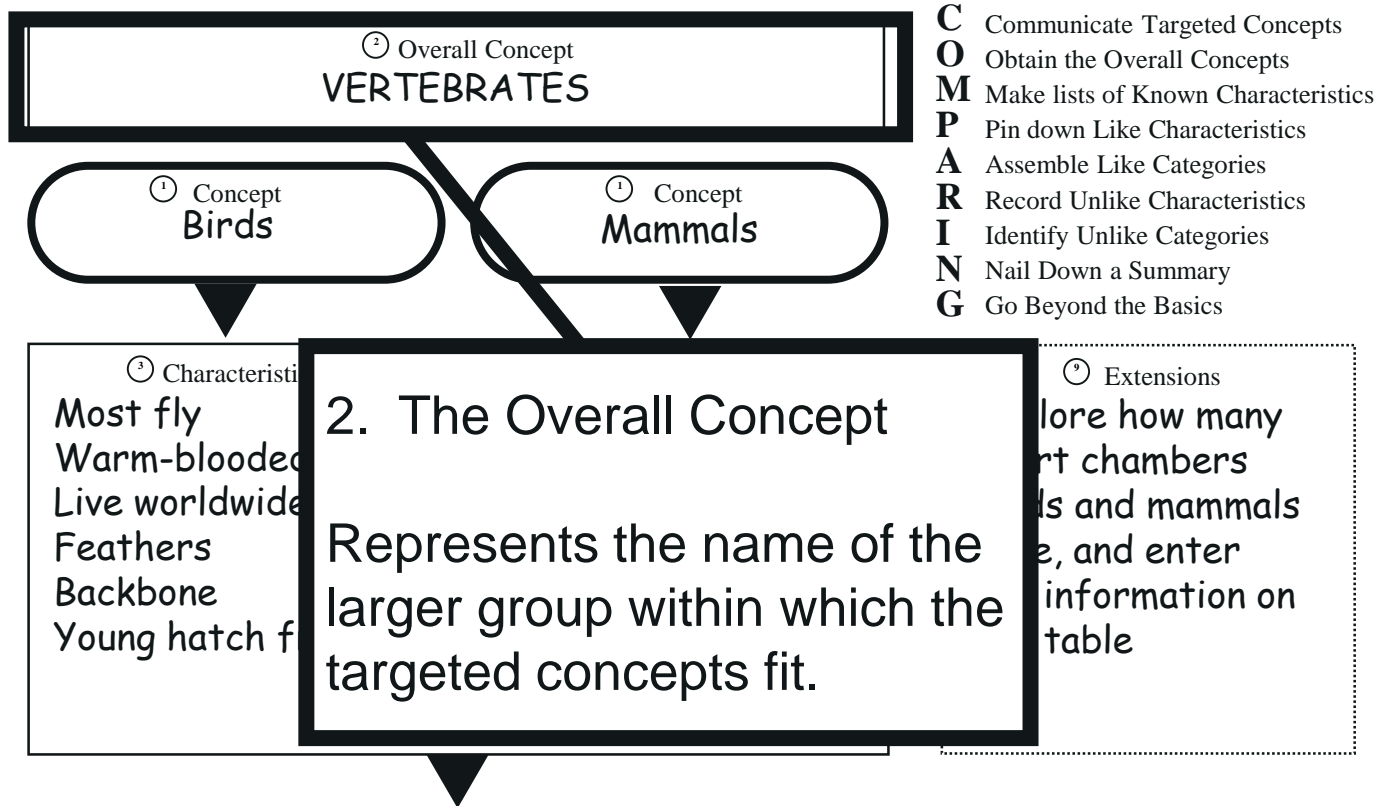
Comparison Table

② Overall Concept VERTEBRATES		C Communicate Targeted Concepts O Obtain the Overall Concepts M Make lists of Known Characteristics P Pin down Like Characteristics A Assemble Like Categories R Record Unlike Characteristics I Identify Unlike Categories N Nail Down a Summary G Go Beyond the Basics	
① Concept Birds	① Concept Mammals		
③ Characteristics Most fly Warm-blooded Live worldwide Feathers Backbone Young hatch from eggs	③ Characteristics Most travel by foot Warm-blooded Live worldwide Hair Backbone Most young born live		② Extensions Explore how many heart chambers birds and mammals have, and enter the information on the table
④ Like Characteristics Warm-blooded Live worldwide Backbone			⑤ Like Categories How body temperature is regulated. Where they live. How their bodies are supported.
⑥ Unlike Characteristics Most fly Feathers Young hatch from eggs	⑥ Unlike Characteristics Most travel by foot Hair Most young born live		⑦ Unlike Categories How they travel. What covers their bodies. How young are born.
⑧ Summary Birds and mammals are two vertebrates that are alike with regard to how their body temperature is regulated, where they live and how their bodies are supported. They are different in terms of what covers their bodies and how they travel from one place to another. They are also different in terms of how their young are born.			

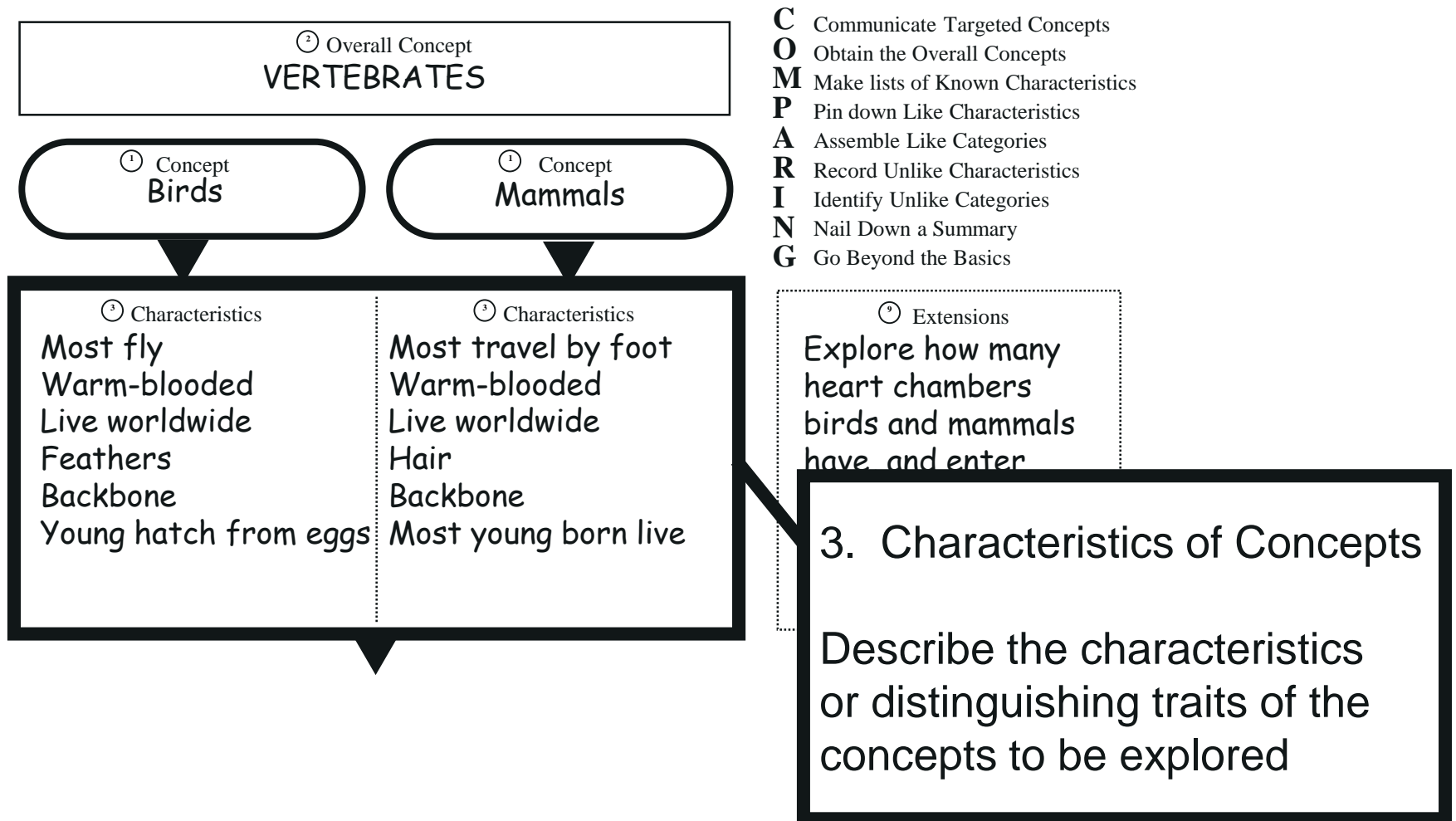
Comparison Table



Comparison Table



Comparison Table



② Overall Concept
VERTEBRATES

① Concept
Birds

① Concept
Mammals

③ Characteristics
Most fly
Warm-blooded
Live worldwide
Feathers
Backbone
Young hatch from eggs

③ Characteristics
Most travel by land
Warm-blooded
Live worldwide
Hair
Backbone
Most young born live

4. Like Characteristics

Those qualities or attributes that the targeted concepts have in common.

④ Like Characteristics
Warm-blooded
Live worldwide
Backbone

⑤ Like Categories
How body temperature is regulated.
Where they live.
How their bodies are supported.

- C** Communicate Targeted Concepts
- O** Obtain the Overall Concepts
- M** Make lists of Known Characteristics
- P** Pin down Like Characteristics
- A** Assemble Like Categories
- R** Record Unlike Characteristics

② Overall Concept
VERTEBRATES

① Concept

① Concept

5. Like Categories

③

Most f
Warm
Live w
Feathe
Backb
Young hatch from eggs

The larger groups or categories to which the Like Characteristics belong

Most young born live

④ Like Characteristics

Warm-blooded
Live worldwide
Backbone

C Communicate Targeted Concepts
O Obtain the Overall Concepts
M Make lists of Known Characteristics
P Pin down Like Characteristics
A Assemble Like Categories
R Record Unlike Characteristics
I Identify Unlike Categories
N Nail Down a Summary
G Go Beyond the Basics

⑨ Extensions

Explore how many heart chambers birds and mammals have, and enter the information on the table

⑤ Like Categories

How body temperature is regulated.
Where they live.
How their bodies are supported.

6. Unlike Characteristics

Characteristics of the targeted concepts that are related yet not shared

④ Like Characteristics

Warm-blooded
Live worldwide
Backbone

supported

⑥ Unlike Characteristics

Most fly
Feathers
Young hatch from eggs

⑥ Unlike Characteristics

Most travel by foot
Hair
Most young born live

⑦ Unlike Categories

How they travel.
What covers their
bodies.
How young are born.

⑧ Summary

Birds and mammals are two vertebrates that are alike with regard to how their body temperature is regulated, where they live and how their bodies are supported. They are different in terms of what covers their bodies and how they travel from one place to another. They are also different in terms of how their young are born.

7. Unlike Categories

Larger groups or categories to which the Unlike Characteristics belong.

⑤ Like Categories

How body temperature is regulated.
Where they live.
How their bodies are supported.

⑥ Unlike Characteristics

Most fly
Feathers
Young hatch from eggs

⑥ Unlike Characteristics

Most travel by foot
Hair
Most young born live

⑦ Unlike Categories

How they travel.
What covers their bodies.
How young are born.

⑧ Summary

Birds and mammals are two vertebrates that are alike with regard to how their body temperature is regulated, where they live and how their bodies are supported. They are different in terms of what covers their bodies and how they travel from one place to another. They are also different in terms of how their young are born.

④ Like Characteristics

Warm-blooded
Live worldwide
Backbone

⑤ Like

How body
temperature
regulated.
Where the
How their
supported.

8. Summary

An understanding of the similarities and differences between concepts that can either:

- explain how the concepts are alike or different in terms of named categories,
- explain how the concepts are alike or different in terms of both characteristics and categories, or
- raise questions or list insights gained from the comparison.

⑥ Unlike Characteristics

Most fly
Feathers
Young hatch from eggs

⑥ Unlike Characteristics

Most travel by foot
Hair
Most young born live

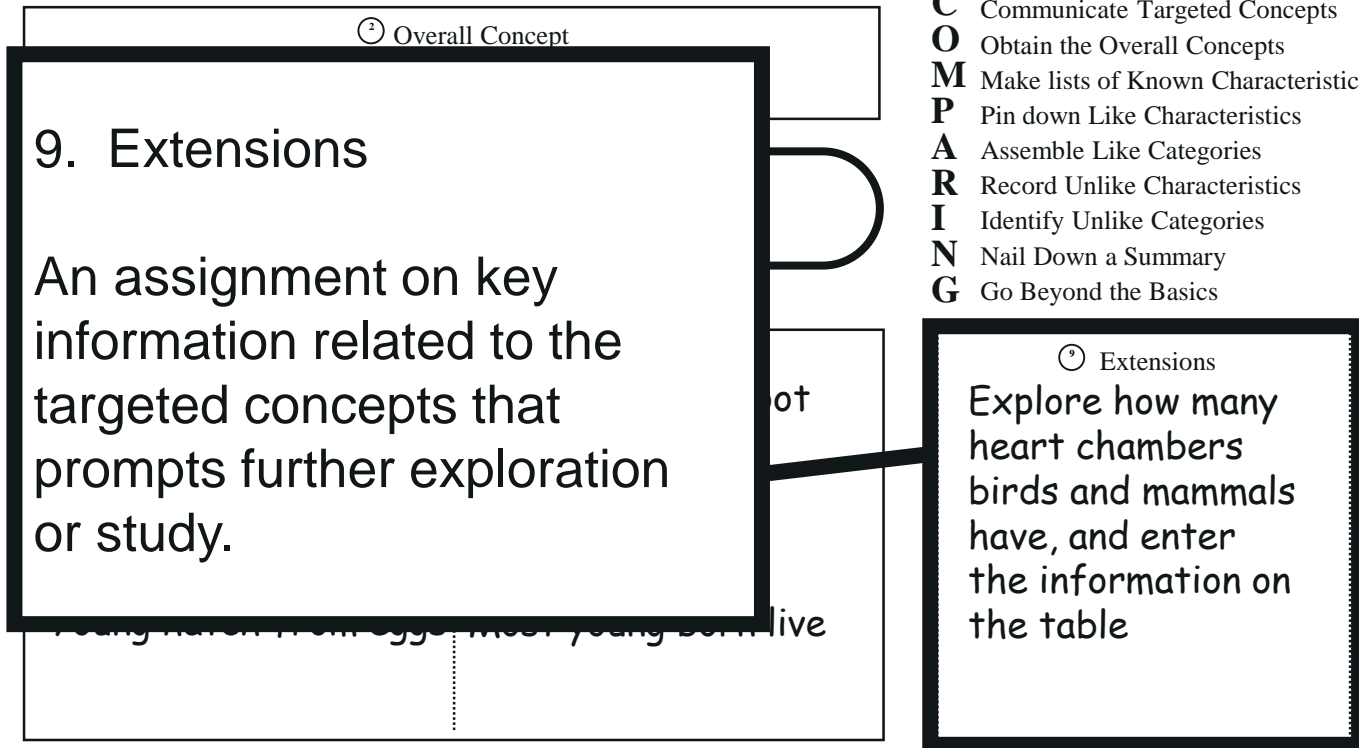
⑦ Unlike

How they
What covers
bodies.
How young

⑧ Summary

Birds and mammals are two vertebrates that are alike with regard to how their body temperature is regulated, where they live and how their bodies are supported. They are different in terms of what covers their bodies and how they travel from one place to another. They are also different in terms of how their young are born.

Comparison Table



The Comparing Linking Steps



Guide the teacher to:



- present the Comparison Table effectively;



- involve students in constructing and using the Comparison Table;



- investigate the relationship between concepts; and



- focus student attention on learning.



The COMPARING Linking Steps



- **Communicate Targeted Concepts.**



- **Obtain the Overall Concept.**



- **Make Lists of Known Characteristics.**



- **Pin Down Like Characteristics.**



- **Assemble Like Categories.**

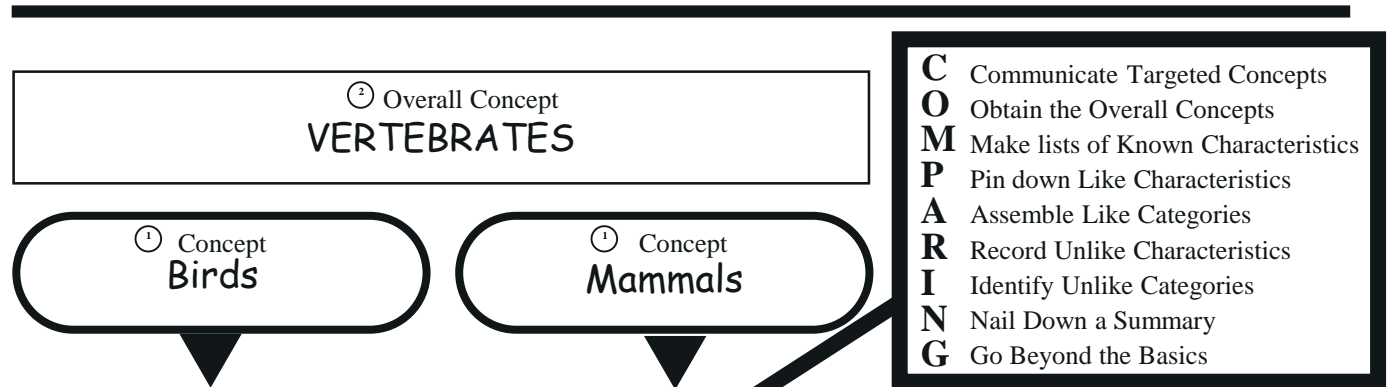


- **Record Unlike Characteristics.**

- **Identify Unlike Categories.**

- **Nail Down a Summary.**

- **Go Beyond the Basics.**



The Linking Steps

These steps guide the teacher during the in-class, interactive presentation of the Comparison Table.

The teacher prepared a draft of the Comparison Table in advance of the lesson, but the final version is co-constructed with the students during class.

These steps are cued by the acronym **COMPARING**.

⑨ Extensions
 Explore how many heart chambers birds and mammals have, and enter the information on the table

⑤ Like Categories
 How body temperature is regulated.
 Where they live.
 How their bodies are supported.

Checking the Names of the Overall & Targeted Concepts



Try to make a statement like:



“By understanding the economic conditions in the North in 1860 and the economic conditions in the South in 1860 (concepts being compared), we can understand the economic causes of sectionalism in the U.S. (Overall Concept).”



“Fish and mammals (concepts being compared) are two kinds of vertebrates (Overall Concept).”



Checking the Names of the Overall & Targeted Concepts



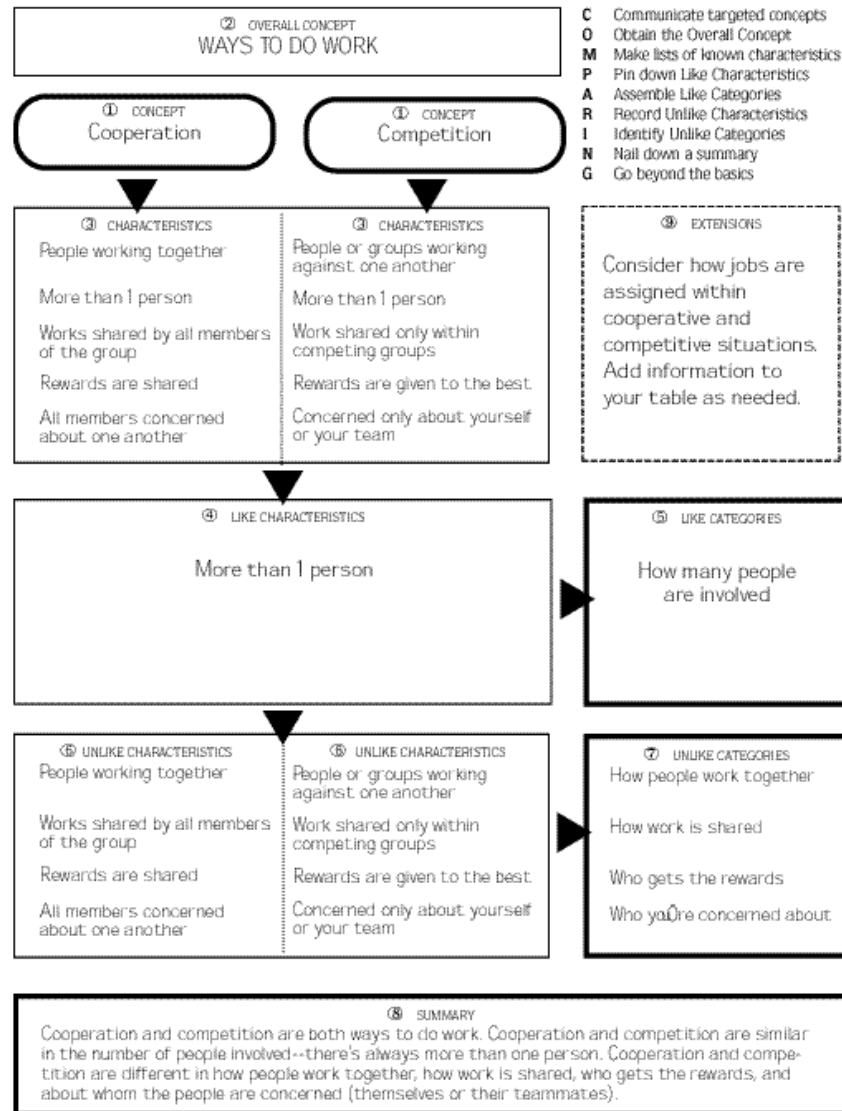
Try to make a statement like:



“Comedy and tragedy (concepts being compared) are two forms of drama (Overall Concept).”



COMPARISON TABLE



Comparison Table

② Overall Concept		
② Concept		② Concept
③ Characteristics		③ Characteristics
⑧ Extensions	④ Like Characteristics	⑤ Like Categories
	⑥ Unlike Characteristics	⑦ Unlike Categories
	⑧ Summary	

② Overall Concept

① Concept

① Concept

① Concept

① Concept

① Concept

③ Characteristics

③ Characteristics

③ Characteristics

③ Characteristics

③ Characteristics

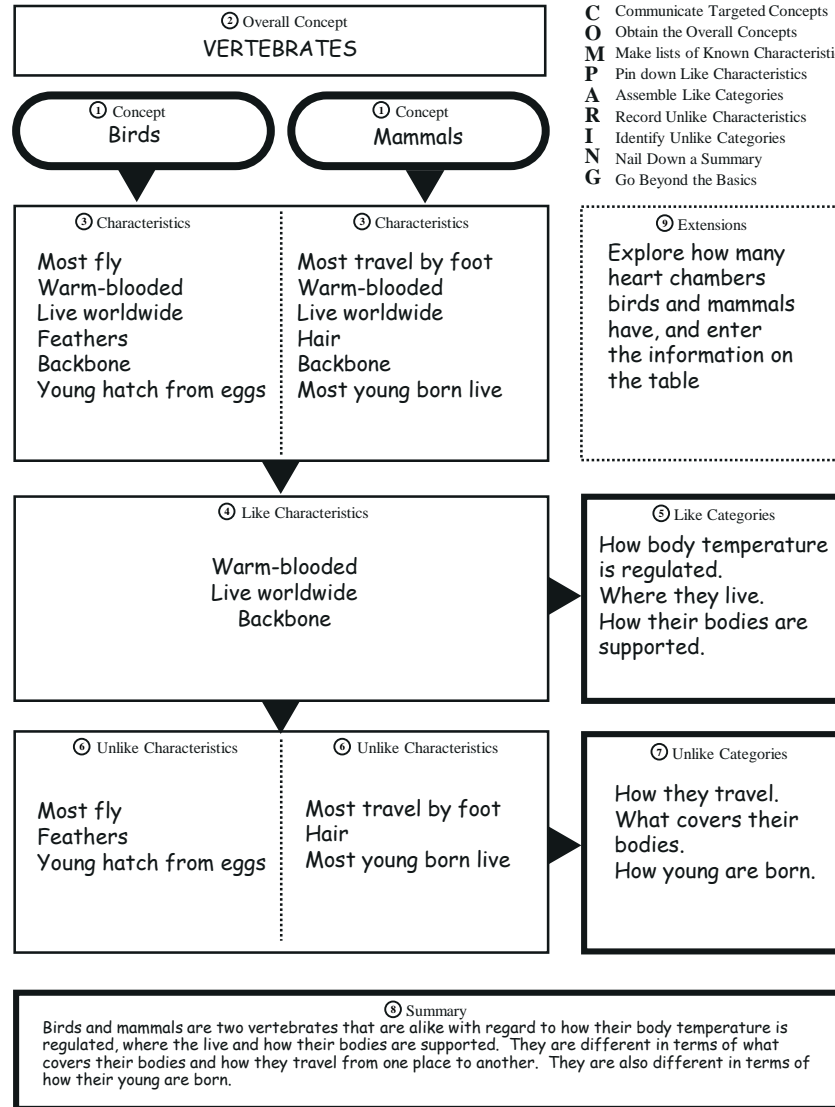
Steps 1: communication Targeted Concepts

Steps 3: Make lists of Known Characteristics

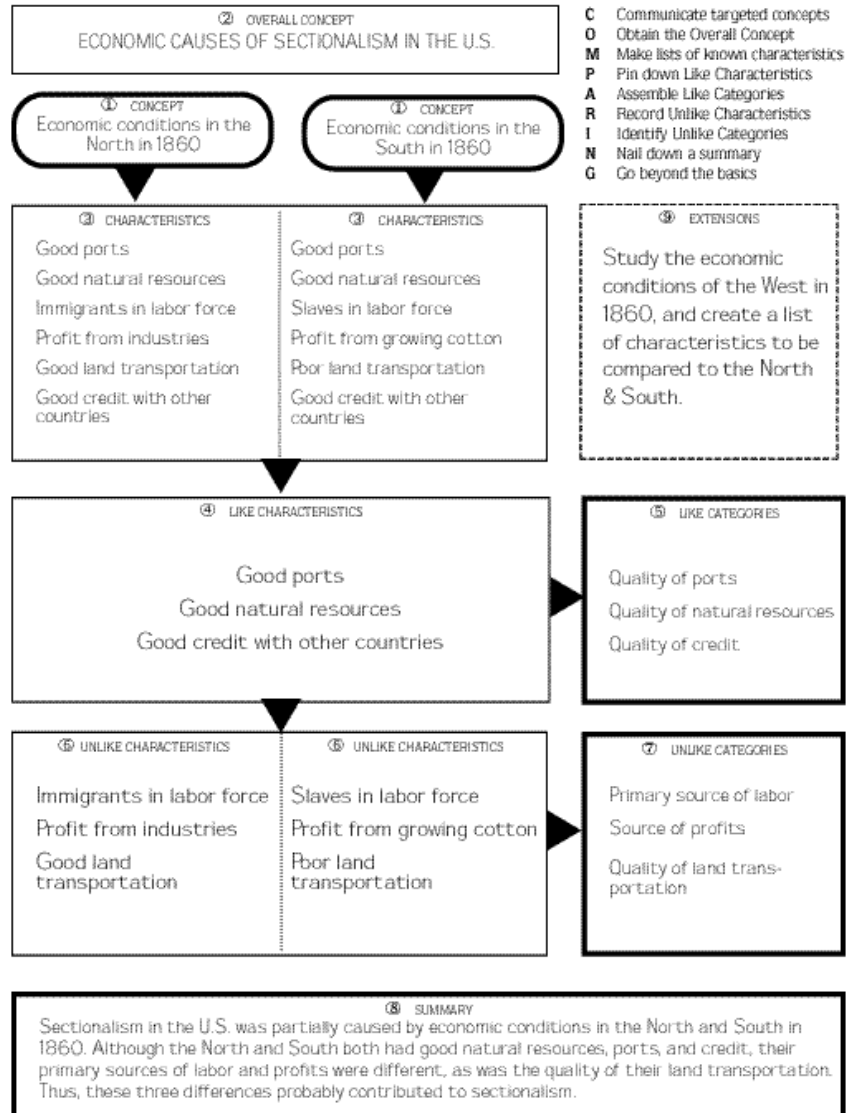
Multiple-Concept Comparison Table, p. 2

Concept	Concept	Concept	Concept	Concept	
④ Like Characteristics	④ Like Characteristics	④ Like Characteristics	④ Like Characteristics	④ Like Characteristics	⑤ Like Categories
⑥ Unlike Characteristics	⑥ Unlike Characteristics	⑥ Unlike Characteristics	⑥ Unlike Characteristics	⑥ Unlike Characteristics	⑦ Unlike Categories
⑧ Summary					⑨ Extensions Steps 4 -9 of the Concept Comparison Routine Steps 4: Pin down Like Characteristics Steps 5: Assemble Like Categories Steps 6: Record Unlike Characteristics Steps 7: Identify Unlike Categories Steps 8: Nail down a Summary Steps 9: Go beyond the Basics

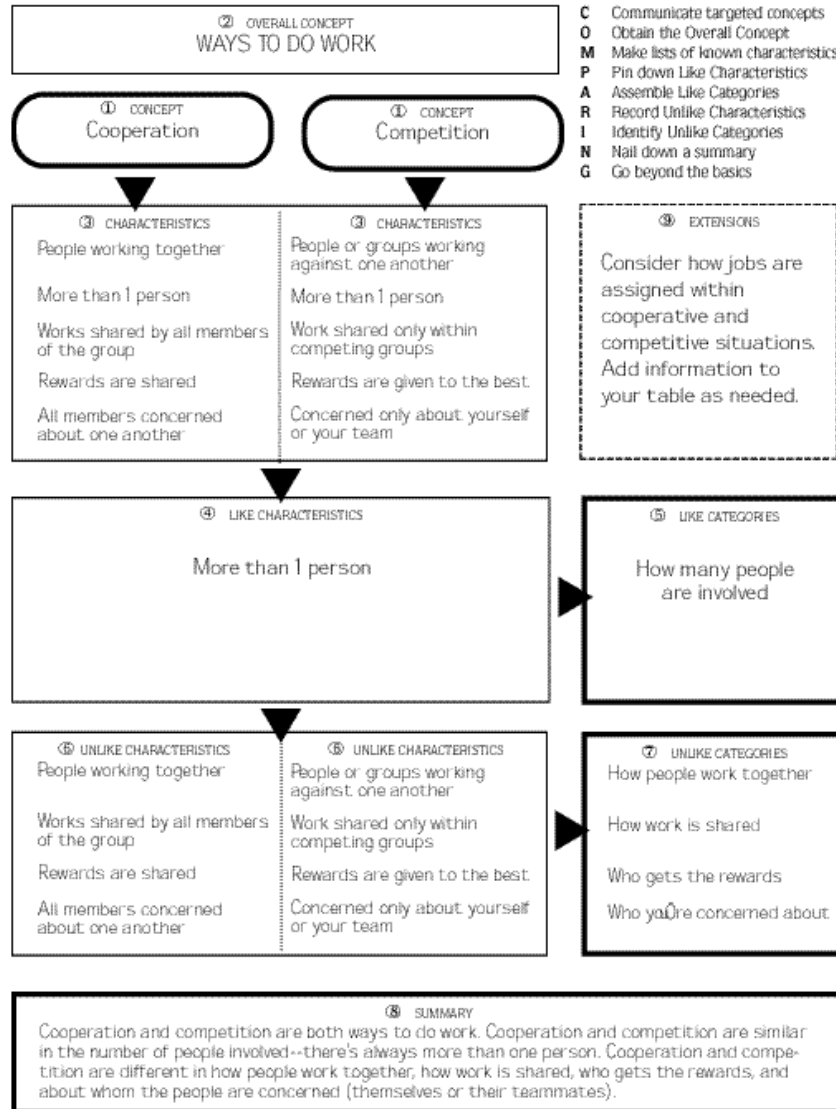
Comparison Table



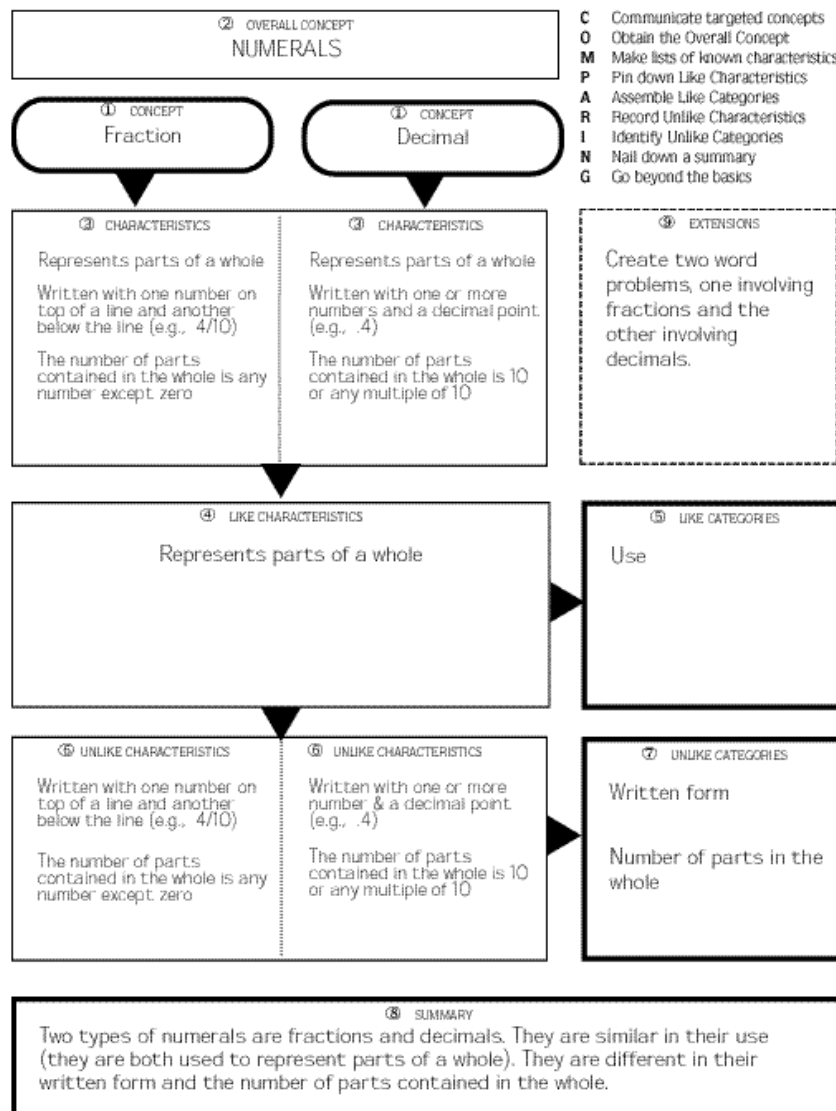
COMPARISON TABLE



COMPARISON TABLE



COMPARISON TABLE



COMPARISON TABLE

