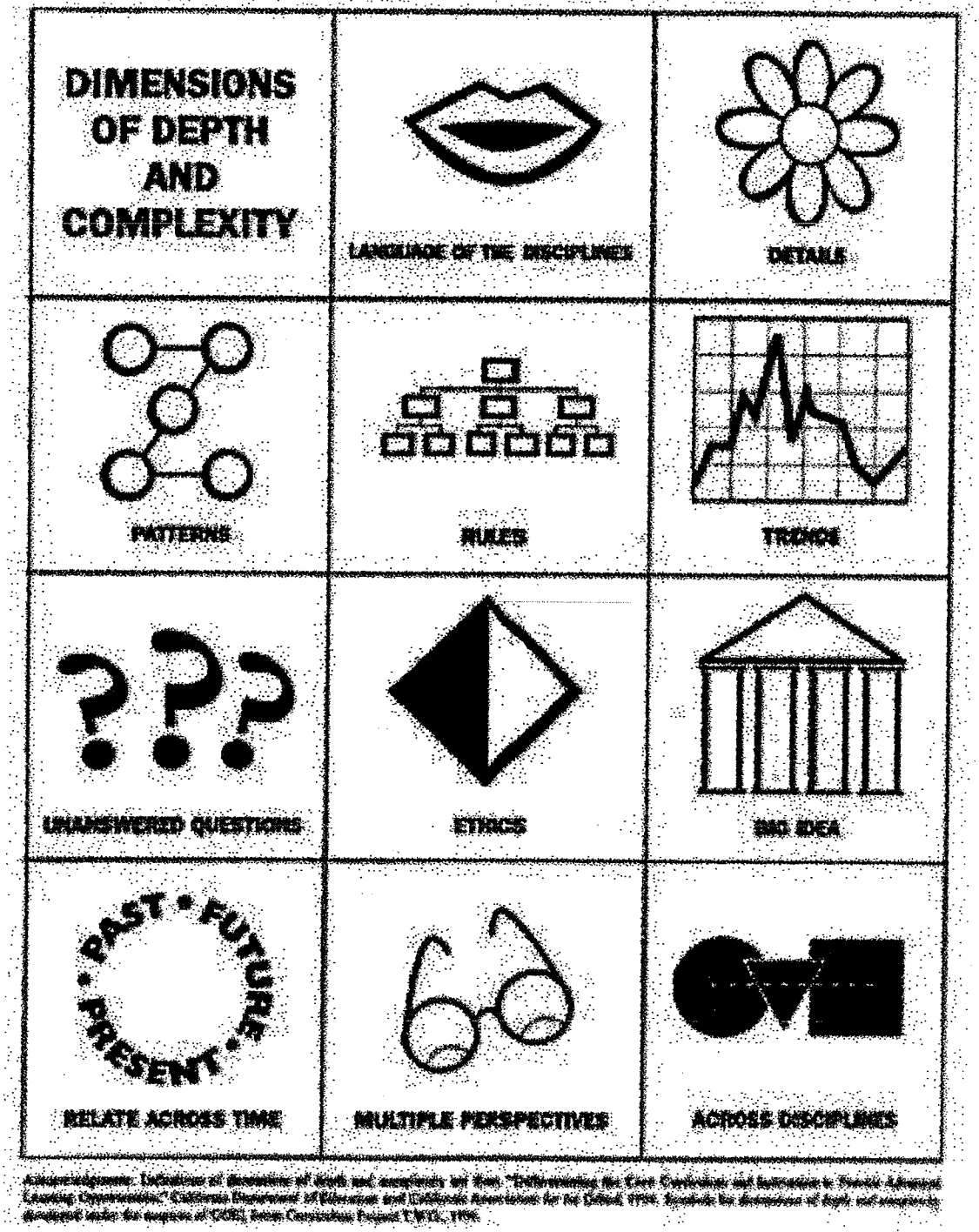
# CCSS Collaborative Learning Time

## Introducing the Icons of…

## Dimensions of Depth & Complexity




Created By: Robert Lundstrom and Elizabeth Nakagawa
Camellia Basic Elementary School

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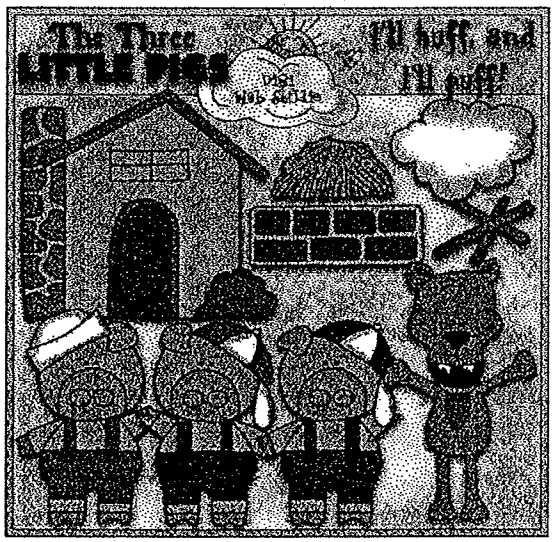
  - Not taking shortcuts
  - Doing things the right way



## Goldilocks and the Three Bears

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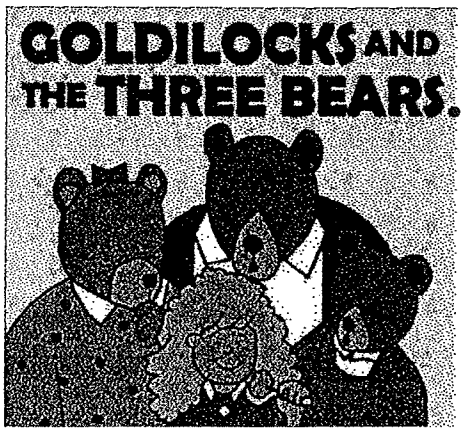

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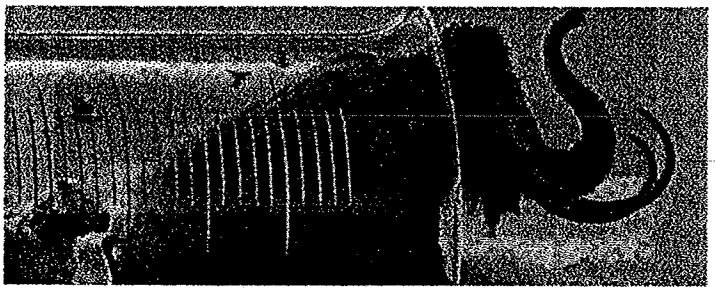
    - Examples:
        - Past: Animals flourished
        - Present: Becoming extinct because of human activities
        - Future: possibly bring some extinct animals back
            - Should we? What would happen? Would it work?



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        - Could this science work?

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- Student Friendly Icon Description
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    - Use Trend Graphs, Articles

# CCSS Collaborative Learning Time
# Robert Lundstrom and Elizabeth Nakagawa

## First Meeting - 3/26/15 – 2:15 – 3:15

1) Discussed and planned ideas for collaboration time
   a. Created meeting times
   b. Delegated responsibilities for implementation

## Next Meeting - 3/31/15 – 12:00 – 3:00 p.m.

1) ICON Introduction Activities
   a. The True Story of the Three Little Pigs
      i. **Multiple Perspectives**
         1. Original story of the 3 little pigs
         2. The "True" story (perspective from the wolf)
      ii. **Unanswered Questions**
         1. Which story is accurate?
         2. Why was one building method successful when the others weren't.
      iii. **Big Ideas**
         1. The importance of hard work
         2. Not taking shortcuts
         3. Doing things the right way.
   b. Goldilocks and the Three Little Bears

i. **Details**
    1. Played in forest
    2. Found empty
    3. Went in uninvited
    4. Tasted all three meals

ii. **Patterns**
    1. Great big bear, middle-sized bear, wee little bear
    2. Great big bowl, middle-sized bowl, wee little bowl
    3. Great big chair, middle-sized chair, wee little bowl
    4. Patterns:
        a. Rule of 3
            i. 3 bears
            ii. 3 bowls
            iii. 3 beds
            iv. 3 chairs

iii. **Rules**
    1. Safety rules
    2. Societal rules
    3. Parental rules

iv. **Ethics**
    1. Is it O.K. to go into someone's house uninvited?
    2. Is it O.K. to steal someone's food without asking?

c. <u>Science – Wooly Mammoth Article/Video</u>

i. **Language of the Discipline** http://s3amazonaws.com/pbs-ingest/newshour/20140421_deextinction.mp4
    1. DNA

2. Extinct
3. Species
4. Mammoth
5. De-Extinction

**ii. Change Over Time**

1. Past: Animals flourished
2. Present: Becoming extinct because of human activities
3. Future: possibly bring some extinct animals back
    a. Should we? What would happen? Would it work?

**iii. Trends**

1. The trend is that many animal species are becoming extinct
2. Humans seem to be the cause
3. Is there a way to stop it?
4. Could this science work?

**iv. Across Disciplines**

1. Graph of animal extinction
    a. Analyze the data and draw conclusions from their findings.
    b. Trends in graphs

## Next meeting – 4-10-15

Needs

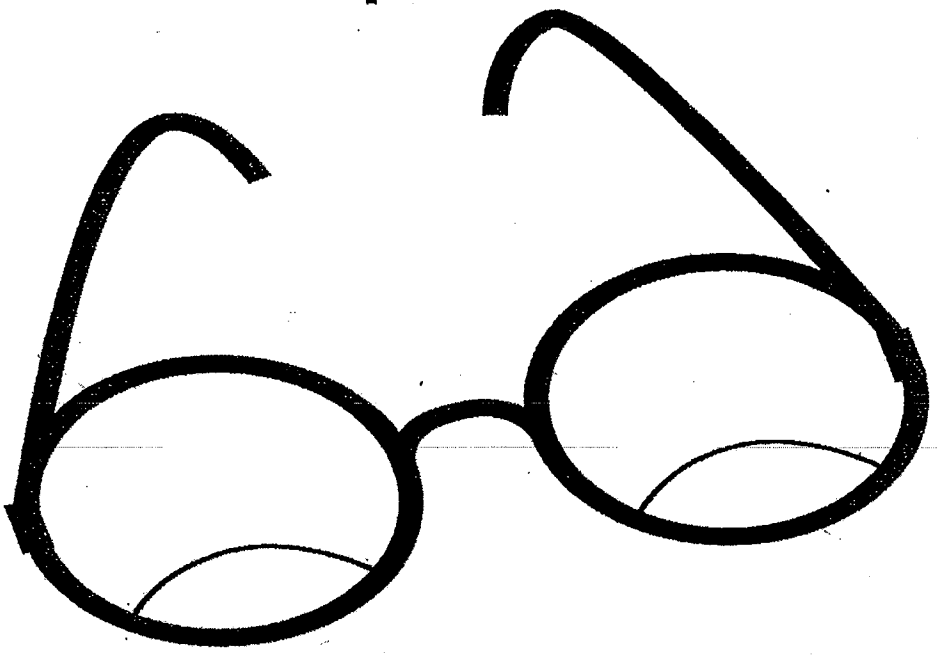
1) Goldilocks and the three Bears
    a. Rules Worksheet

2) The Three Little Pigs
    a. All done (on one sheet)
3) Ethics of Cloning Animals
    a. Language of the Discipline - DONE
    b. Change Over Time
    c. Trends
    d. Across Disciplines

## Final Meeting – 4-16-15

We created worksheets for the final 4 disciplines to complete our introduction to the Icons of Depth and Complexity.

# Multiple Perspectives



* Who agrees and disagrees?
* What role do they play?
* How do their opinions differ?
* Who believes what and why?

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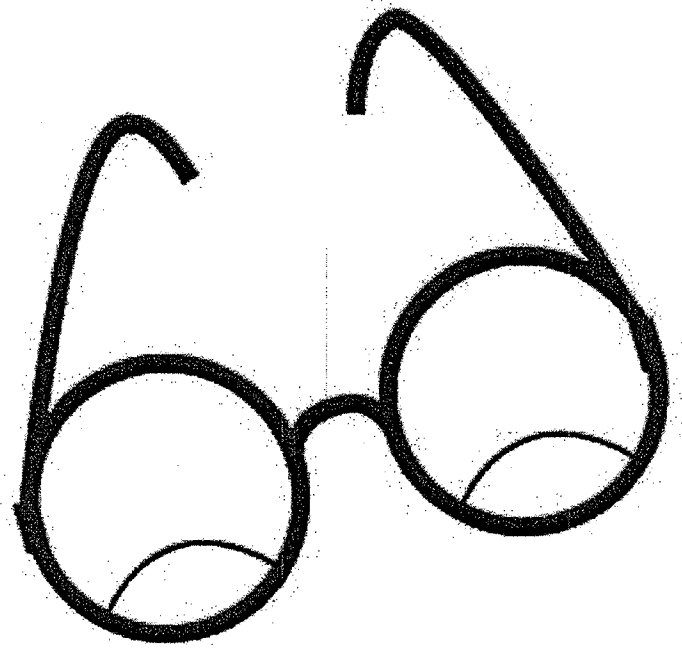
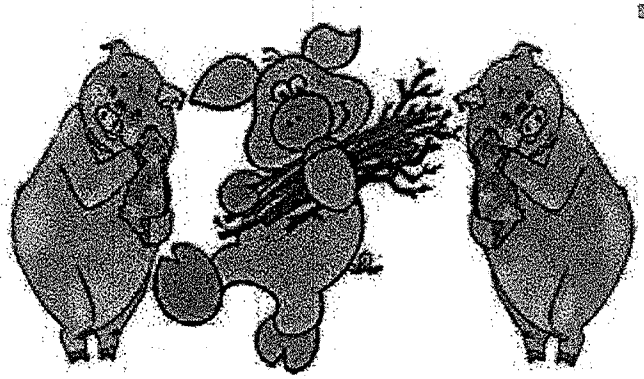
# Multiple Perspectives



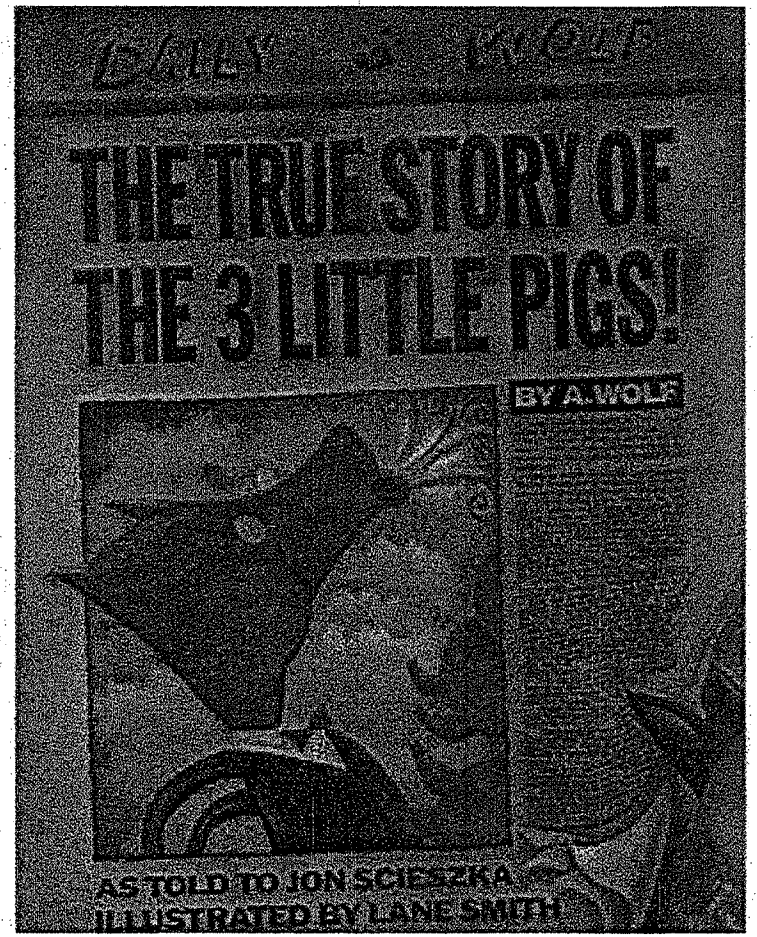
- opposing viewpoints
- differing roles and knowledge
- different perspectives

# What is the story of *The Three Little Pigs*?



- Who were the main characters?
- What was the problem?
- Who was the antagonist? Who was at fault?
- Who was right and who was wrong?

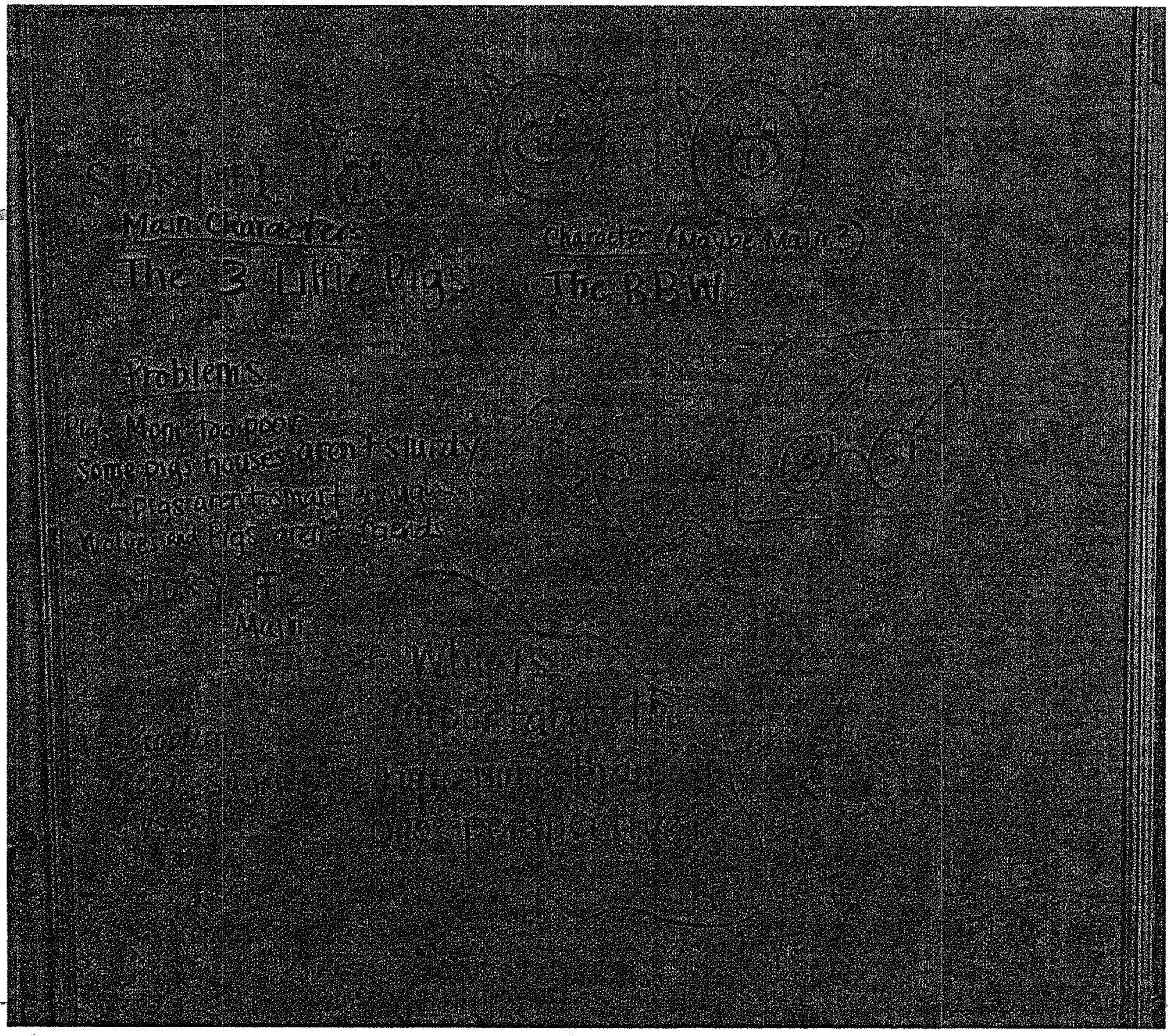
# Read *The True Story of the 3 Little Pigs*



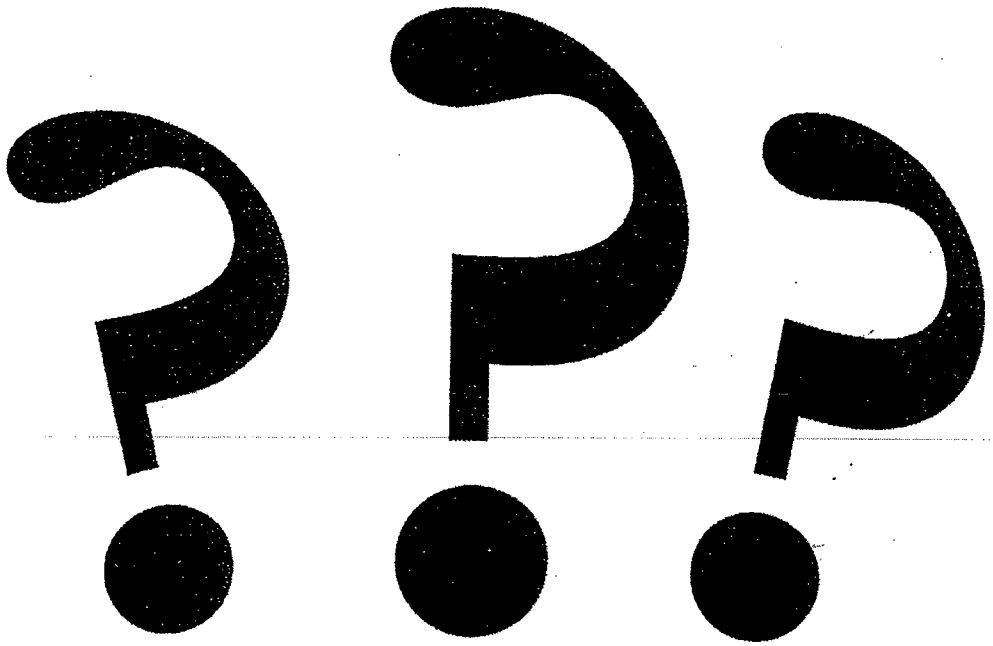
- Who were the main characters?
- What was the problem?
- Who was the antagonist? Who was at fault?
- Who was right and who was wrong?

# What is perspective?

- How did the perspective of the story change?
- How did *your* perspective change after reading the second story?
- Why is perspective important?


STORY #1
Main Characters
The 3 Little Pigs
Character (Maybe Main?)
The BBW
Problems
Pig's Mom too poor
Some pigs houses aren't sturdy
↳ pigs aren't smart enough
Wolves and Pigs aren't friends
STORY #2
Main
Why is
important to
have more than
one perspective?

# Unanswered Questions



* What words don't you understand?
* What is unclear?
* What information is missing?

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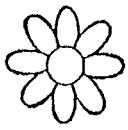
Title: _____ Name: _____

Pages: _____ Date: _____

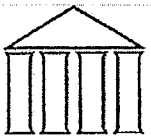


details

Write a 5 sentence summary of your reading.

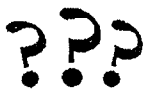
multiple perspectives

Describe how a non-main character feels.



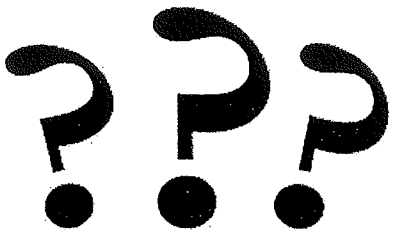
big ideas

Give a one sentence lesson from your reading.



unanswered questions

Write two questions for future reading.



# Unanswered Questions

Name_____

**Key Questions**

- Which story is accurate?
- Why was one building method successful when others weren't?

Directions: Create questions about The Three Little Pigs and The "True Story pertaining to the *Depths of Complexity – Unanswered Questions*

## The Three Little Pigs – Unanswered Questions

_____

_____

_____

_____

_____

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_____

## The "True" Story Unanswered Questions

_____

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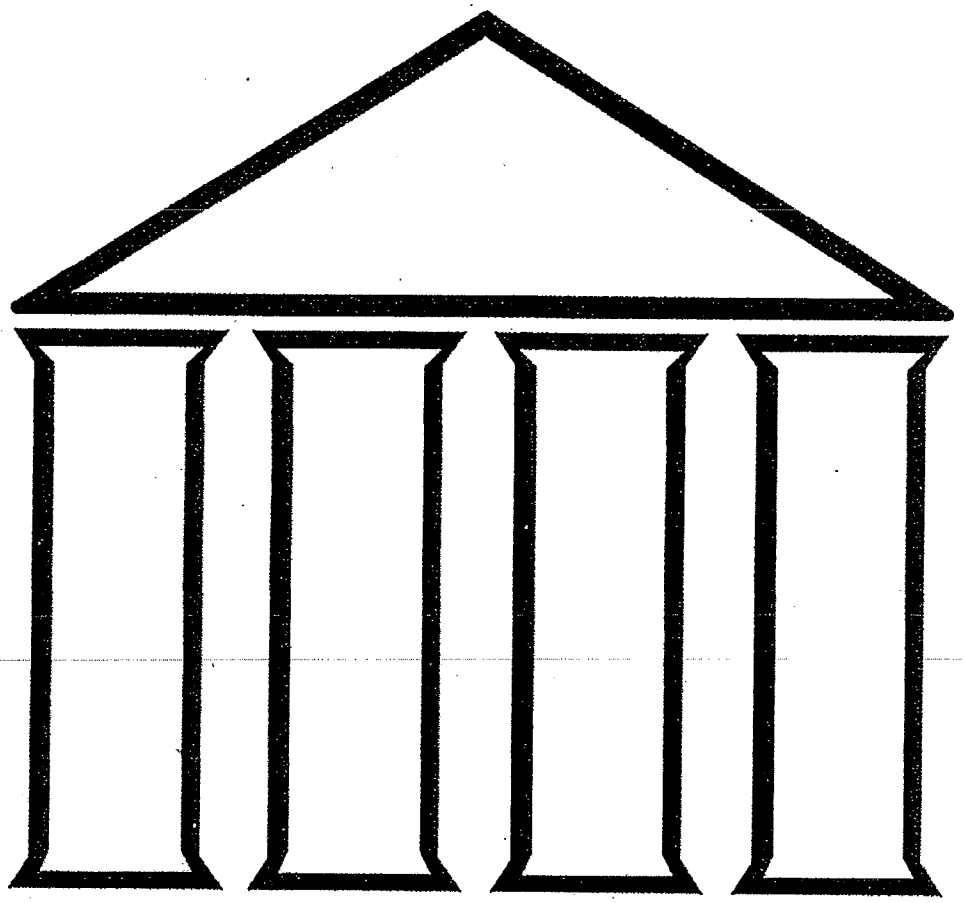
_____

# Big Ideas



* What is the theme?
* State principles or generalizations
* Support opinions with evidence

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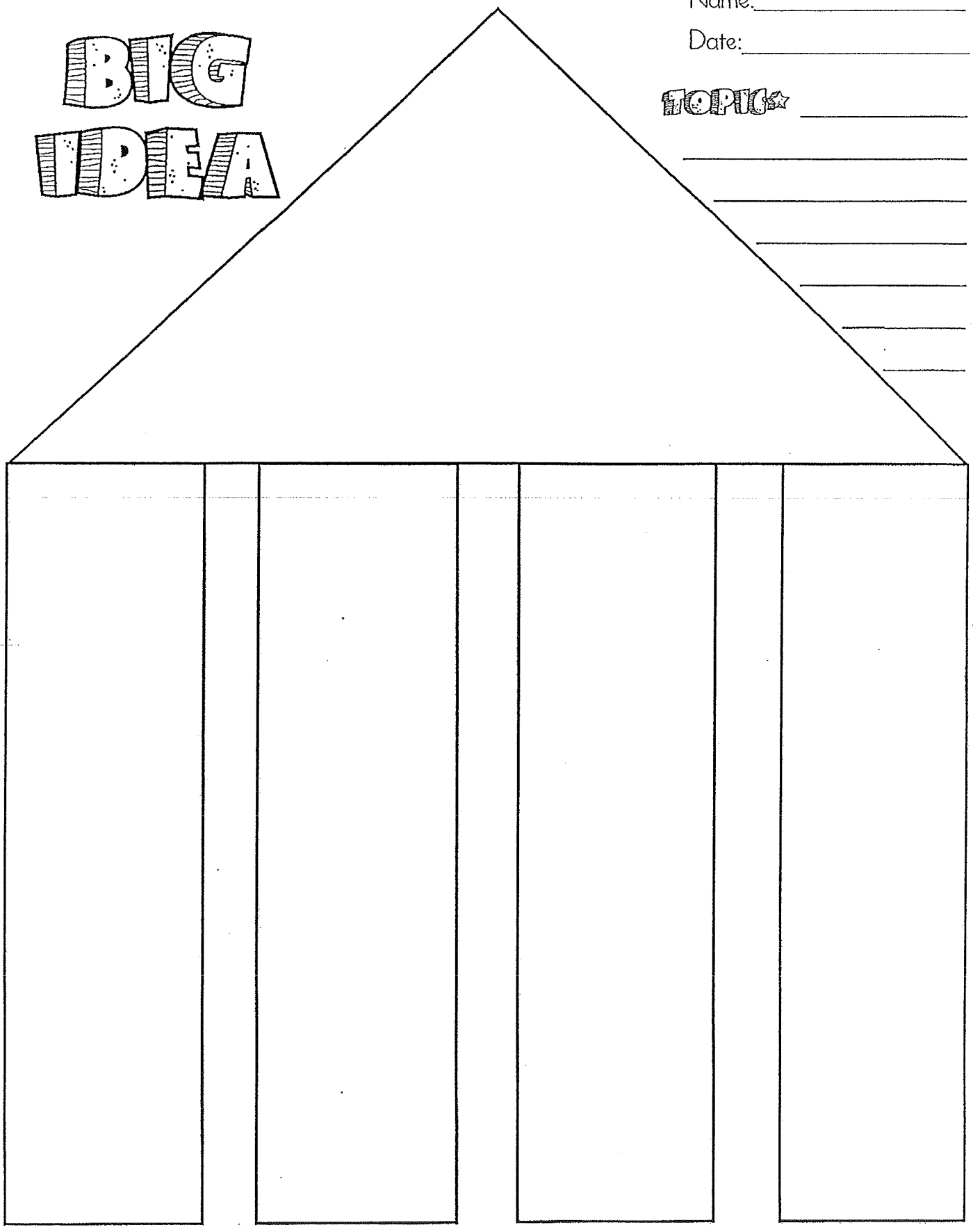
# BIG IDEA

Name:_____

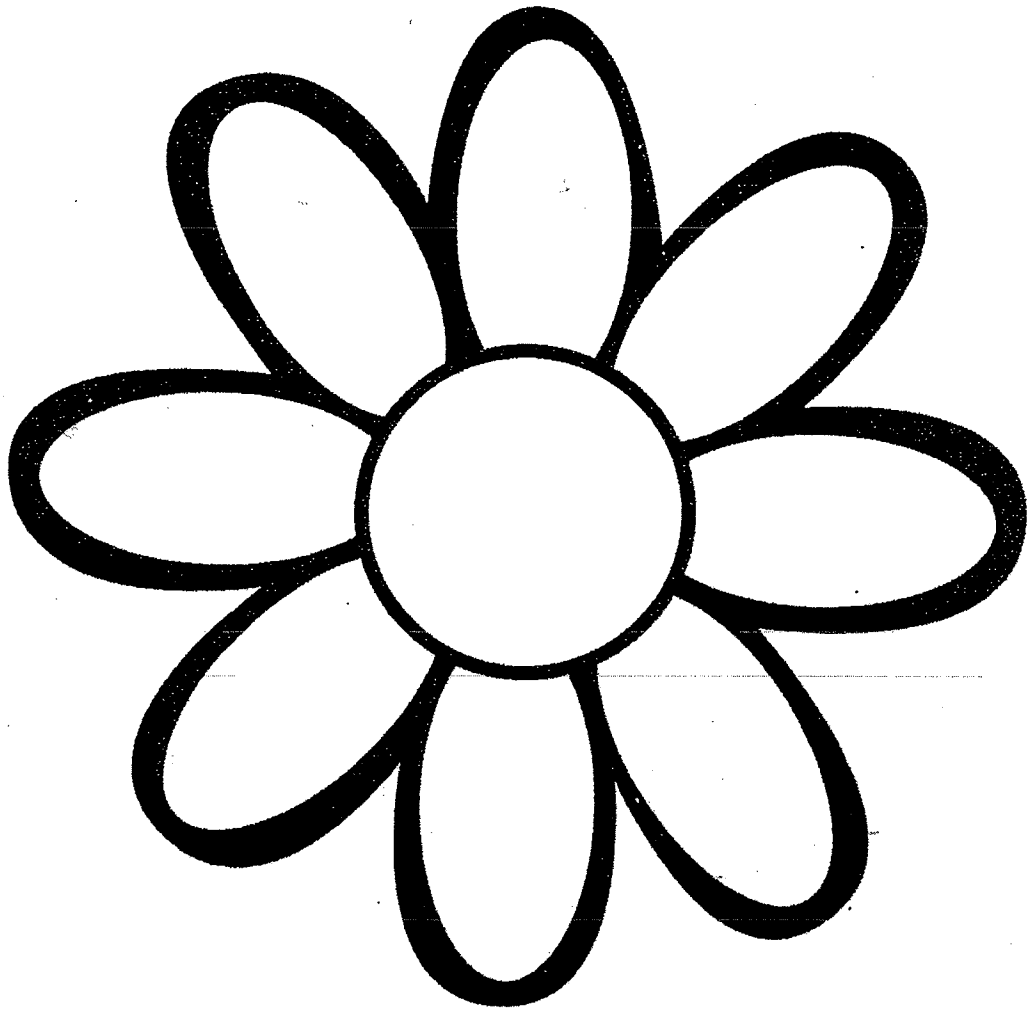
Date:_____

TOPIC ☆ _____



LHoppes Hueneme SD

# Details



Who...? What...?

When...? Where...?

Why...? How...?

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# Applying Depth and Complexity Through Goldilocks and the Three Bears

(Adapted from Santa Ana Unified School District by Merritt Booster)

**Purpose:** The purpose of this lesson is to teach the students how to utilize seven of the elements of depth and complexity. Goldilocks and the Three Bears is the vehicle (common body of knowledge) with which to teach a new concept (depth and complexity). This lesson also serves as an example of how to overlay depth and complexity into an already existing body of knowledge or content.

**Objective:** The student will learn to identify Language of the Discipline , Details , Patterns , Unanswered Questions , Multiple Perspectives Rules , and Ethics in literature using the fairytale Goldilocks and the Three Bears. The students will show evidence of their understanding of the elements of depth and complexity by rewriting Goldilocks and the Three Bears from a different perspective drawing information from the six elements of depth and the one element of complexity discussed.

**Model of Instruction:** Teacher directed using an advanced organizer.

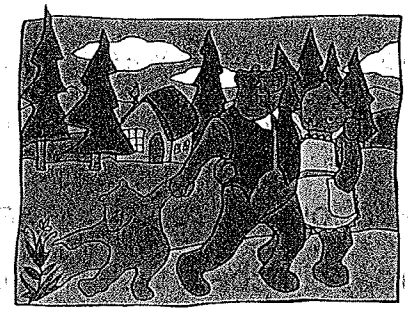
**Motivation:** Provide students with copies of the text [post-it notes - optional]; read Goldilocks and the Three Bears. Point out that students will need to pay close attention to the story in order to recall specific information.

**Practice with Advanced Organizer:** Make seven large charts and lable each with the chosen elements of depth and complexity. The icons may be introduced in this order as it facilitates an easier understanding and each icon becomes the foundation for the next. 1) Language of the Discipline, 2) Details, 3) Patterns, 4) Unanswered Questions, 5) Multiple perspectives, 6) Rules, and 7) Ethics.

[At this point in the lesson it is important to remember this is the students' first introduction to depth and complexity. The type of thinking needed to complete the task must be modeled, and the students will need to be prompted in order to think deeply and to ponder. A discussion of each icon should follow the completion of it. The time involved will vary as to grade level -- from several days, introducing one to two icons a day, to two days, introducing three or four -- or with upper grades introducing all at once. You may either review and/or reread the story each time an icon is introduced and specify what it is the students are attempting to identify and discuss.]

**Summarize and Integrate the Advanced Organizer:** After the icons have been taught, review and discuss each icon. The students will then demonstrate understanding of the elements of depth and complexity by rewriting Goldilocks and the Three Bears from a different perspective. Each element of depth and complexity taught should be reflected in the writing. The extent of which each element of depth and complexity is reflected will vary largely per student and age group. The writing may be guided, shared, or independent depending on the age group of the students.

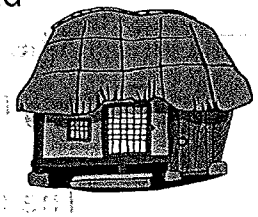
# The Three Bears



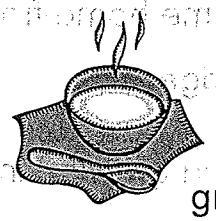
In a far-off country, once upon a time, there was a little girl who was called Goldilocks because of her beautiful golden curls.

Goldilocks loved to romp and play. She loved to run into the woods to gather wildflowers, or to chase butterflies through the open fields.

One day she ran here and she ran there, until at last she found herself in a strange and lonely wood. In the wood she saw a snug little house in which three bears lived. But Goldilocks did not know that three bears lived in this house. One was a Great Big Bear, and one was a Middle-sized Bear, and one was a Wee Little Bear.



The door of the little house was open, so Goldilocks peeped in and saw that it was quite empty. She stepped inside to look about a bit; no one was home. The three bears had just gone out for a walk. They had left their three bowls of porridge on the table to cool.



The porridge smelled very good, and Goldilocks thought that she would like to taste it. So she tasted the porridge in the great big bowl, which belonged to the Great Big Bear, but she found it too hot.

The Middle-sized Bear looked into her bowl and said in her middle-sized voice, "Somebody has been tasting my porridge!"

And the Wee Little Bear cried in his wee little voice, "Somebody has been tasting my porridge and has eaten it all up!"

Then they looked at their chairs and the Great Big Bear growled, "Somebody has been sitting in my chair!"

And the Middle-sized Bear said, "Somebody has been sitting in my chair!"

And the Wee Little Bear cried, "Somebody has been sitting in my chair and has broken it all to pieces!"

The three bears then went into their bedroom, and the Great Big Bear growled, "Somebody has been lying in my bed!"

And the Middle-sized Bear said, "Somebody has been lying in my bed!"

Ant the Wee Little Bear cried, "Somebody has been lying in my bed and here she is!"

At that, Goldilocks woke in a fright and jumped out of the nearest window. She ran away as fast as her legs could carry her, and she never went again to the snug little house of the Three Bears.

The End

## Language of the Discipline

(Vocabulary of the story)
- Romp
- Porridge
- peeped
- snug

(Language of Literature)
- Fairytale
- Rhythm
- Character
- Plot
- Conflict
- Resolution
- Setting
- Artist
- Author
- Anthropomorphic

(Language of a Sociologist)
- Indifference
- Family unit
- Discipline
- Self-reliance
- Cultural
- Supervision / unsupervised
- Morals
- Justice
- Society
- Social services
- Parents

(Language of a Naturalist)
- natural environment
- habitat
- food supply
- forest

## Details

- Played in forest
- found empty house
- went in uninvited
- found porridge
- tasted all three
- biggest: too hot
- middle: too cold
- ate all the smallest
- found chairs
- Tried all three
- biggest: too hard
- middle: too soft
- broke the smallest
- found beds
- biggest: too high
- middle: too low
- slept in smallest
- Bears come back
- Discovered porridge tasted and smallest all gone
- Discovered chairs used and smallest broken
- Discovered beds used and smallest had a girl in it
- Goldilocks woke up
- Goldilocks fled
- Goldilocks never seen again by bears

## Patterns

- Great Big Bear
- Middle-sized Bear
- Wee Little Bear

- Great big bowl
- Middle-sized bowl
- Wee little bowl

- Great big chair
- Middle-sized chair
- Wee little chair

- Great big bed
- Middle-sized bed
- Wee little bed

- Great big voice
- Middle-sized voice
- Wee little voice

- Language pattern of discovery:
  - Great Big Bear **growled**
  - Middle-sized Bear **said**
  - Wee little Bear **cried**

- Tried everything biggest to smallest

- extreme/middle ground/extreme

**Unanswered Questions**

- Where were Goldilock's parents?
- Didn't she know it's illegal and unsafe to enter into a strange house uninvited?
- Why hadn't she eaten?
- Why was she so destructive?
- Why were three bears living in a house?
- What would they have done with Goldilockshad they caught her?
- Do society's laws apply in the forest?
- Whose laws do bears abide by?
- What were bears doing eating porridge anyway?

**Multiple Perspectives**

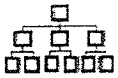
Within story:

- Goldilocks: hungry, tired, curious, inquisitive, innocent
- Great Big Bear: Father-like, gruff, justice-oriented, leader
- Middle-sized bear: motherly, gentle, enabler, peace-maker
- Wee Little Bear: babyish, whiner, victim, innocent, "cried"

Outside story:

- Sheriff
- Social Worker
- Council of Animals
- Environmentalist
- Biologist
- Parent

**Rules**



- Rule of three:
  3 bears
  3 bowls
  3 beds
  3chairs
  3 parts to bears' names
  (also recurrence of patterns of three in other fairy tales (e.g. three wishes?))
- Rules of language in fairy tales: "Once upon a time" and "The end"
- Large to small order consistent through story
- Moral of story - lesson learned
- Societal rules
- Safety rules
- natural laws about what bears do
- parental rules

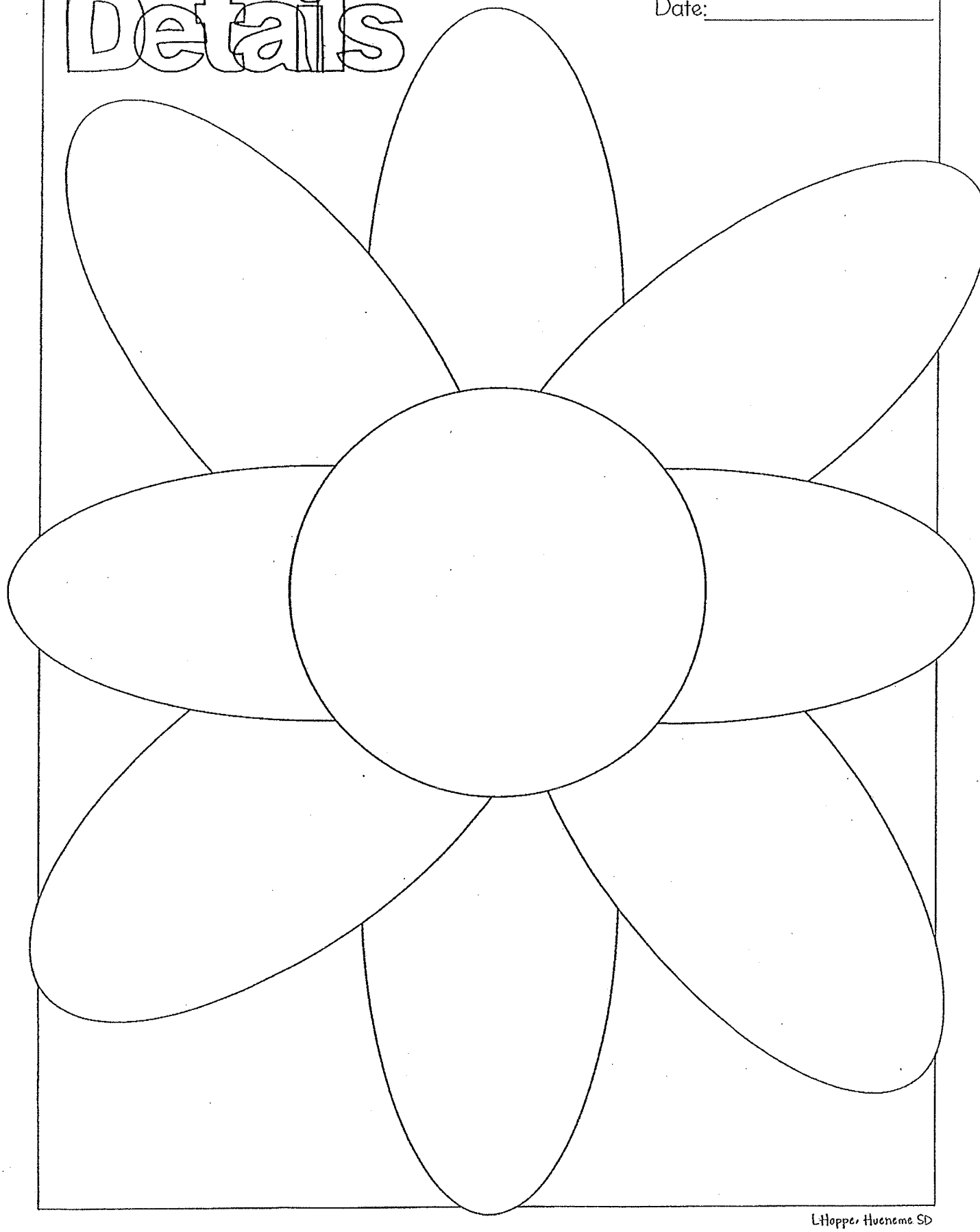
**Ethics:**

Is it against the law to break into someone's house?
Whose law? (man's law, natural law?)
What if Goldilocks were an orphan and was lost, scared, and hungry?
What if the bears were starving?
Should Goldilocks be punished for breaking and entering?
Should she have to pay for the chair?
Should her parents be taken to court?
Should the bears be always wary and lock their doors?
What does that say about society?

# Details

Name:_____

Date:_____



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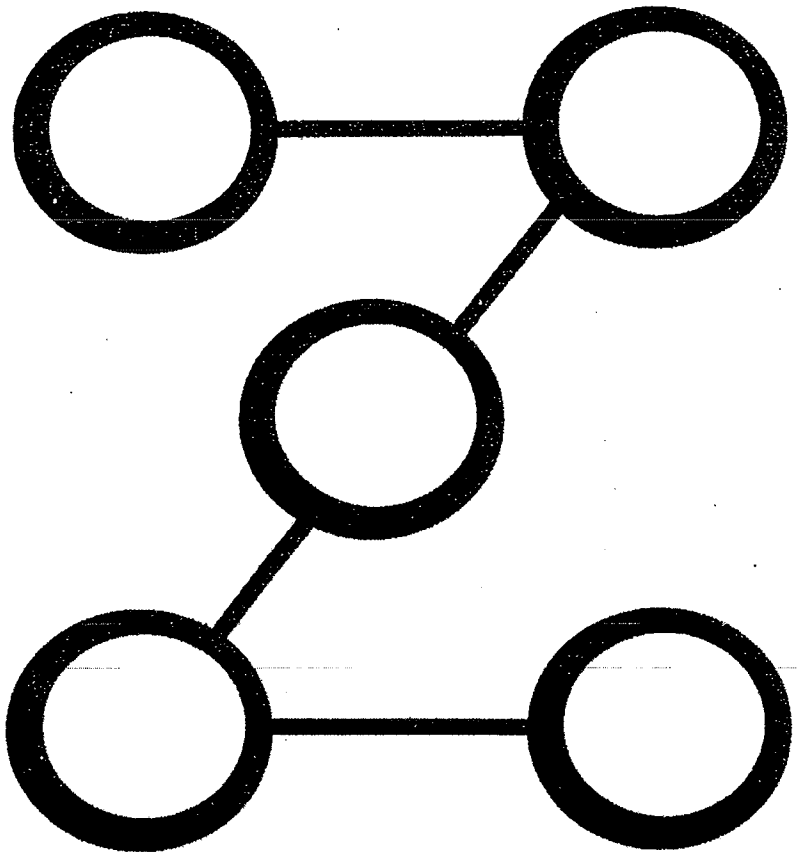
# Patterns



* What patterns do you notice?
* Can you predict what will come next?
* Why do you think the pattern exists?

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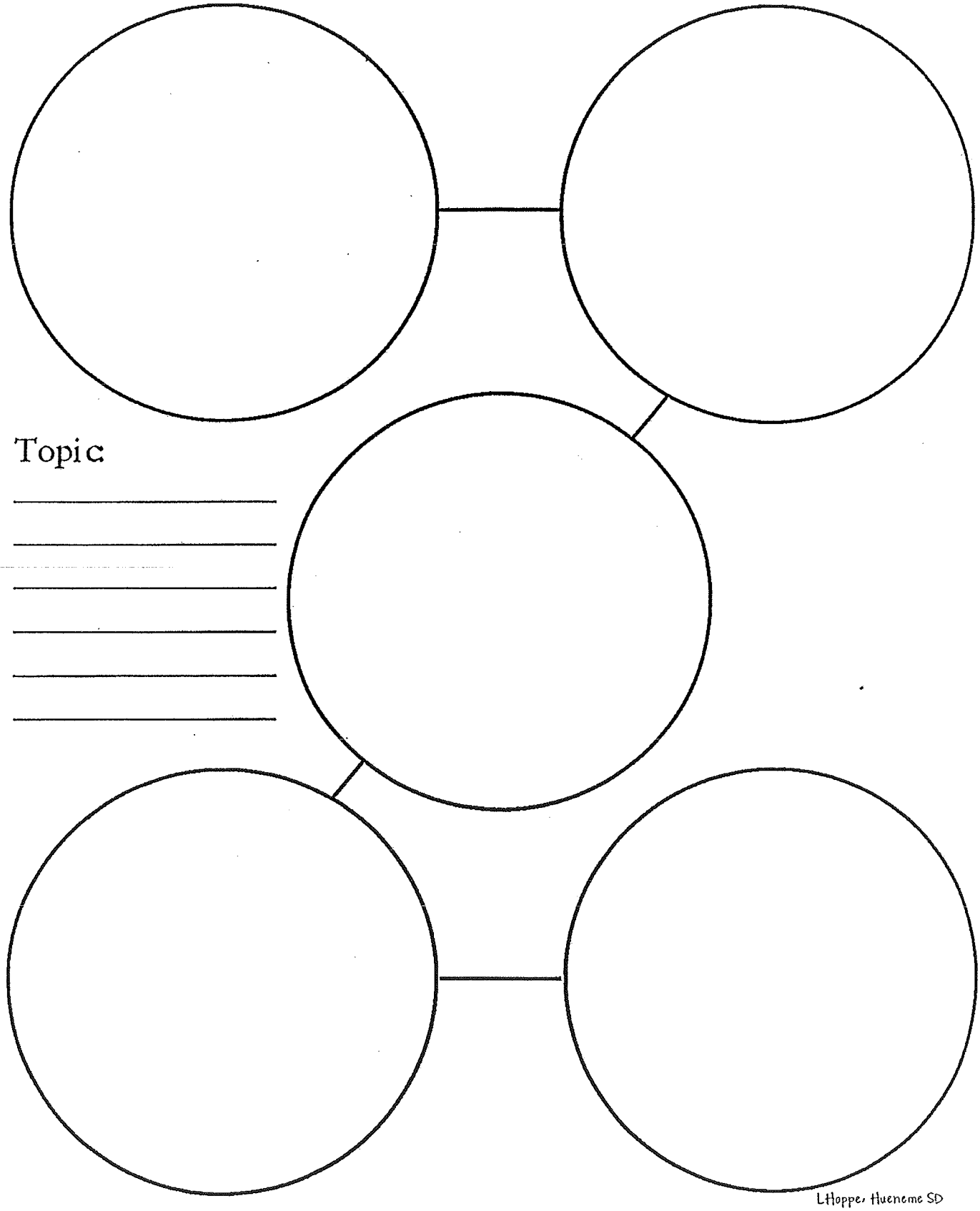
# Patterns

Name:_____

Date:_____



Topic

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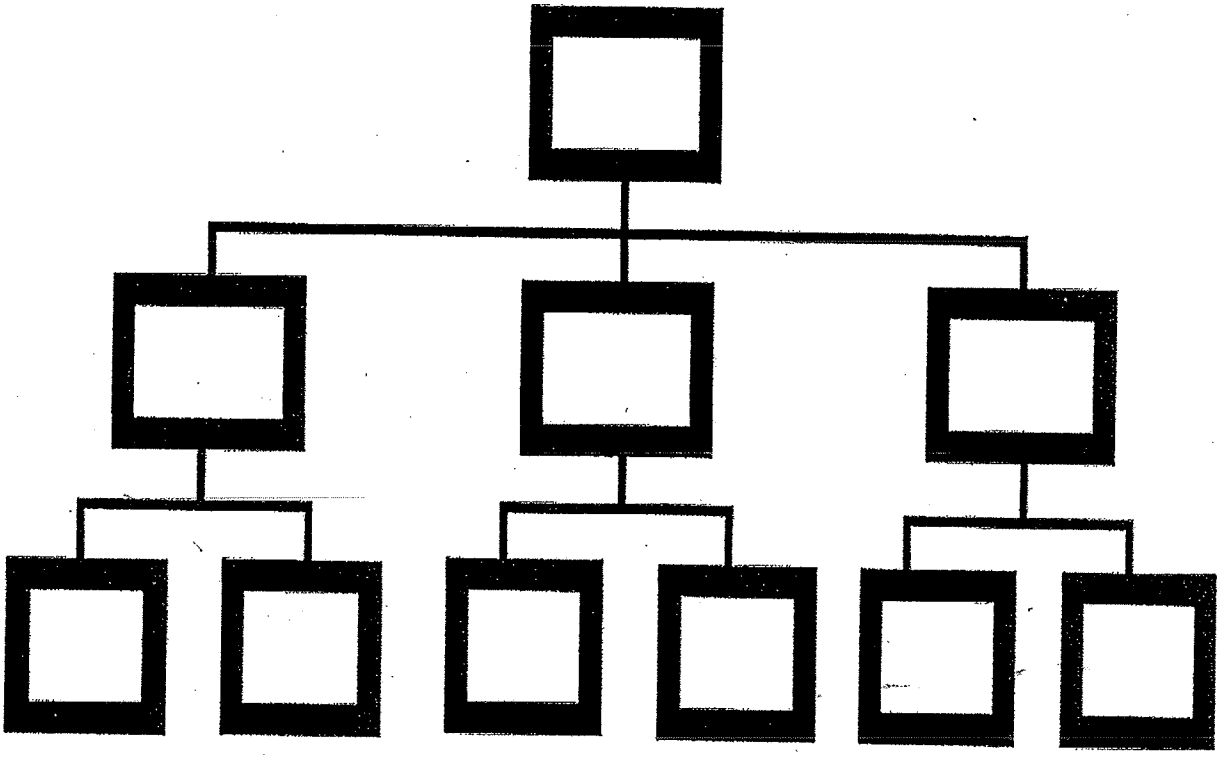
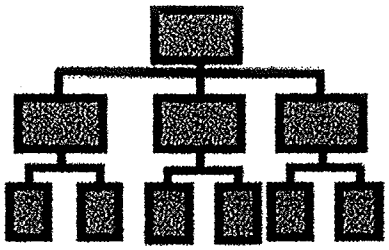
# Rules



* What are the rules?
* How is it structured?



# Rules

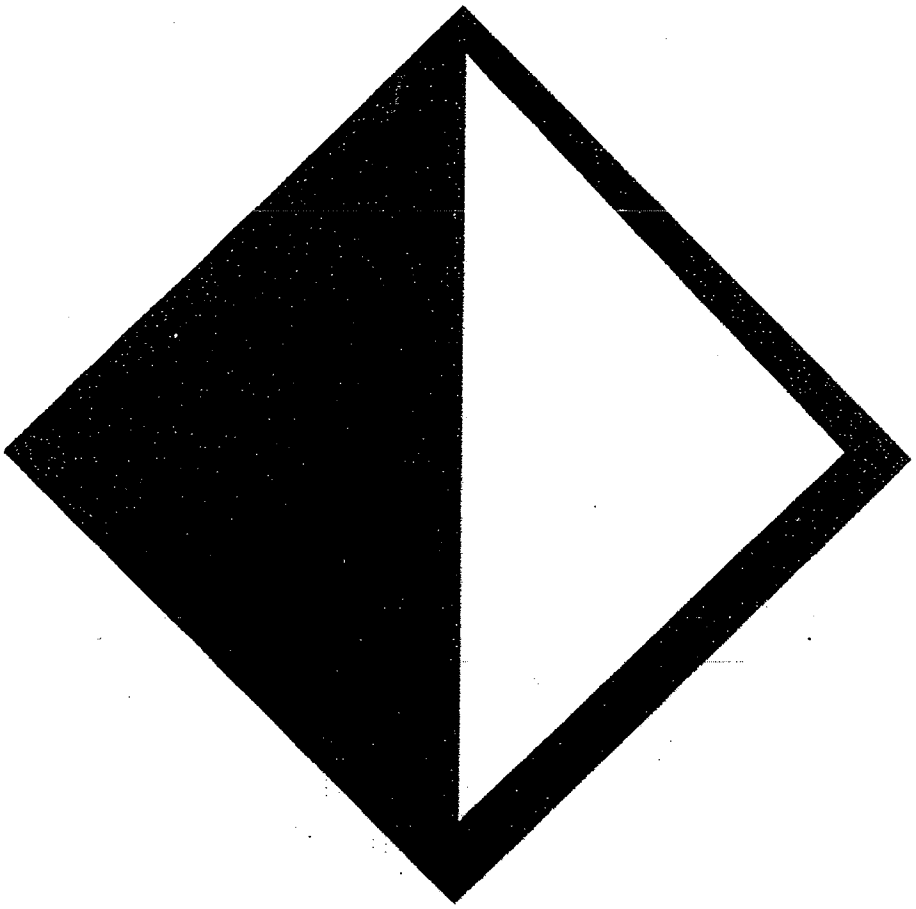
Name_____

**Key Questions**

- Were there any societal rules broken?
- Were there any rules of language?
- Were there any safety rules broken?

Directions: Create a graphic organizer to gather your ideas about Goldilocks and the Three Bears pertaining to the *Depths of Complexity - Rules*

# Ethics



* What is the conflict about?
* Who believes the behavior or action to be right or wrong and why?

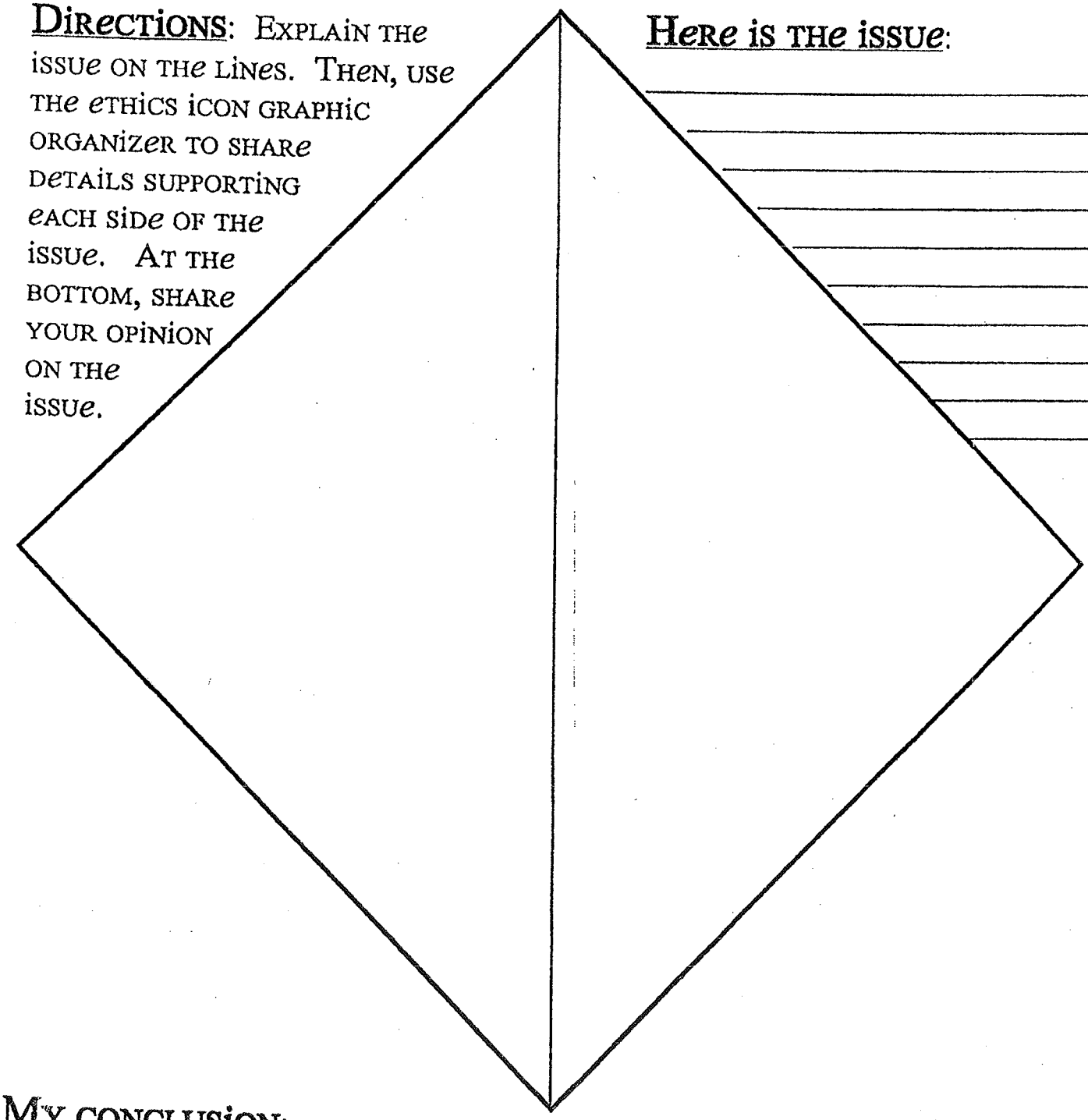
# Ethics

Name:_____

Date:_____

**Directions**: Explain the issue on the lines. Then, use the ethics icon graphic organizer to share details supporting each side of the issue. At the bottom, share your opinion on the issue.

**Here is the issue:**



**My conclusion:** _____

# Language of the Discipline

* What vocabulary is used?
* What tools are used?
* What methods are used?

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# Language of the Discipline

Name_____

**Key Questions**

- What vocabulary is used?
- What tools are used?
- What methods are used?

Directions: Take notes to gather ideas about cloning as it pertaining to the *Depths of Complexity – Language of the Discipline*

# Pros and Cons of Cloning Extinct Animals

Nov 22, 2014

Whenever the cloning of extinct animals is brought up, images of the movie Jurassic Park tends to float to the top of the mind. Thanks to modern technology, it is possible to bring back animals that were once extinct through the process of cloning. Not only would this bring back the diversity that our planet once had, but it could be a way for humanity to write some pretty serious wrongs that have happened over the centuries there are definitely some pros and cons to consider with this practice.

## The Pros of Cloning Extinct Animals

**It would expand our scientific knowledge.**
Imagine what scientist could learn from real life woolly mammoth? By bringing back animals that were once extinct, we can gain actually insights into the process natural evolution and potentially bring in natural resources that are not available to us at the moment.

**It could save human lives.**
Genetic engineering is required to clone extinct animals. The field of genetic engineering is just in its infancy stage right now. By focusing on bringing back extinct animals, we could develop technologies that would help treat genetic diseases and mutations that occur in humans. This would then increase the amount of people who could live long and fulfilling lives.

**We could save the environment.**

Although the earth adapts and adjusts, there is no question that the extinction of the species has a dramatic harmful impact on specific habitats. By bringing back animals that have been extinct, we can equalize these habitats and begin restoring the damage that has occurred with the absence of these animals.

# The Cons of Cloning Extinct Animals

ASPEC In Content

knowledge would be expanded, there is also a good chance that we would cause a lot of harm to these cloned animals.

**They might kill us.**

Depending on how long the animal has been extinct, there may be specific pathogens and diseases that these animals would carry that could literally kill us. It might be really cool to see a dodo bird, but it wouldn't be really cool to catch a deadly retrovirus from one.

**There are serious moral questions that must be answered.**

We might feel like we owe it to extinct species to bring them back, but there is a very real moral question about playing God that must be answered. Is cloning an extinct animal writing a wrong? Or is it simply creating a second wrong in an attempt to make something right? That is a series of questions that must be answered on a personal level.

As with any groundbreaking decision, there will be unforeseen benefits and consequences if we proceed with cloning extinct animals. By weighing the pros and cons, we can together decide if it is the right course of action to take.

# Change Over Time

* What was it like in the past, what is it like now and what might it be like in the future?
* What caused the change?

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# Change over Time

Name_____

**Key Questions**

- What was it like in the past, what is it like now and what might it be like in the future?
- What caused the change?
- How has time affected the information?
- How and why do things change or remain the same?

Directions: Create a graphic organizer to gather your ideas about Cloning as it pertains to the *Depths of Complexity – Change over Time*

# Trends

* Identify cause and effect relationships
* What are influencing factors?

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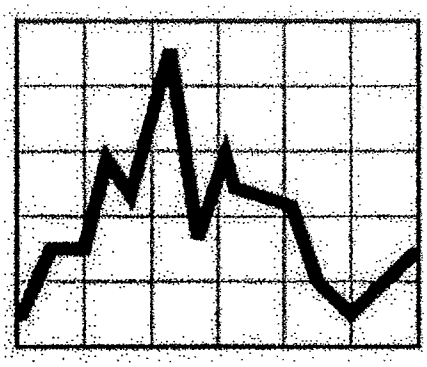


NAME_____

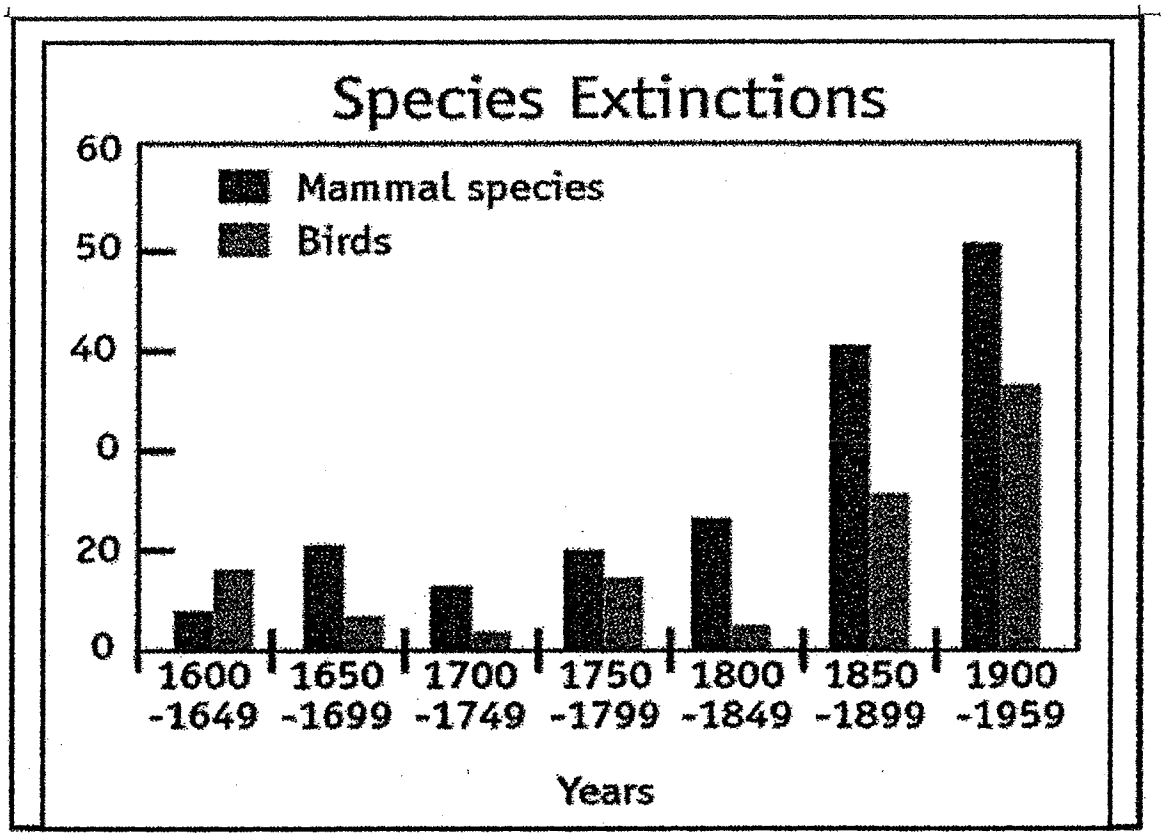
**Key Questions**

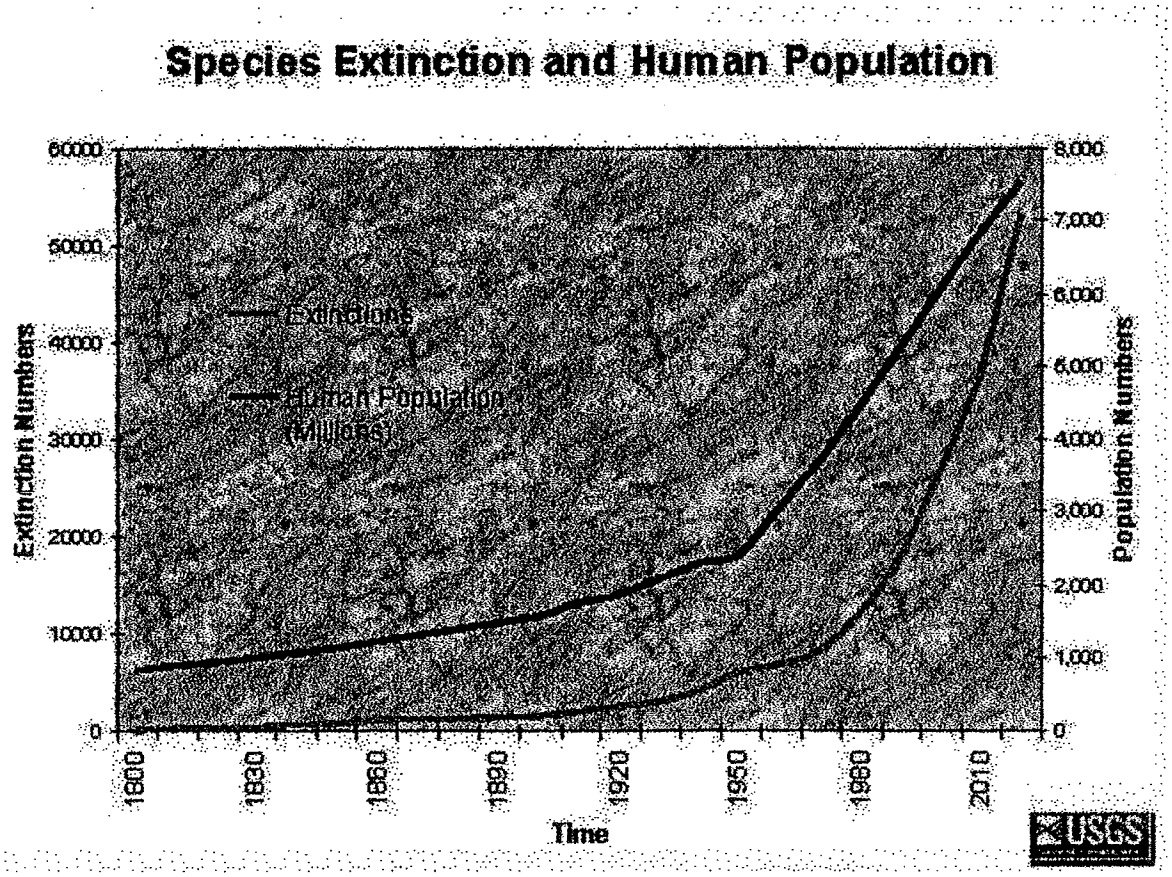
- Identify cause and effect relationship.
- What are influencing factors?
- What factors have contributed to this study?

# Trends

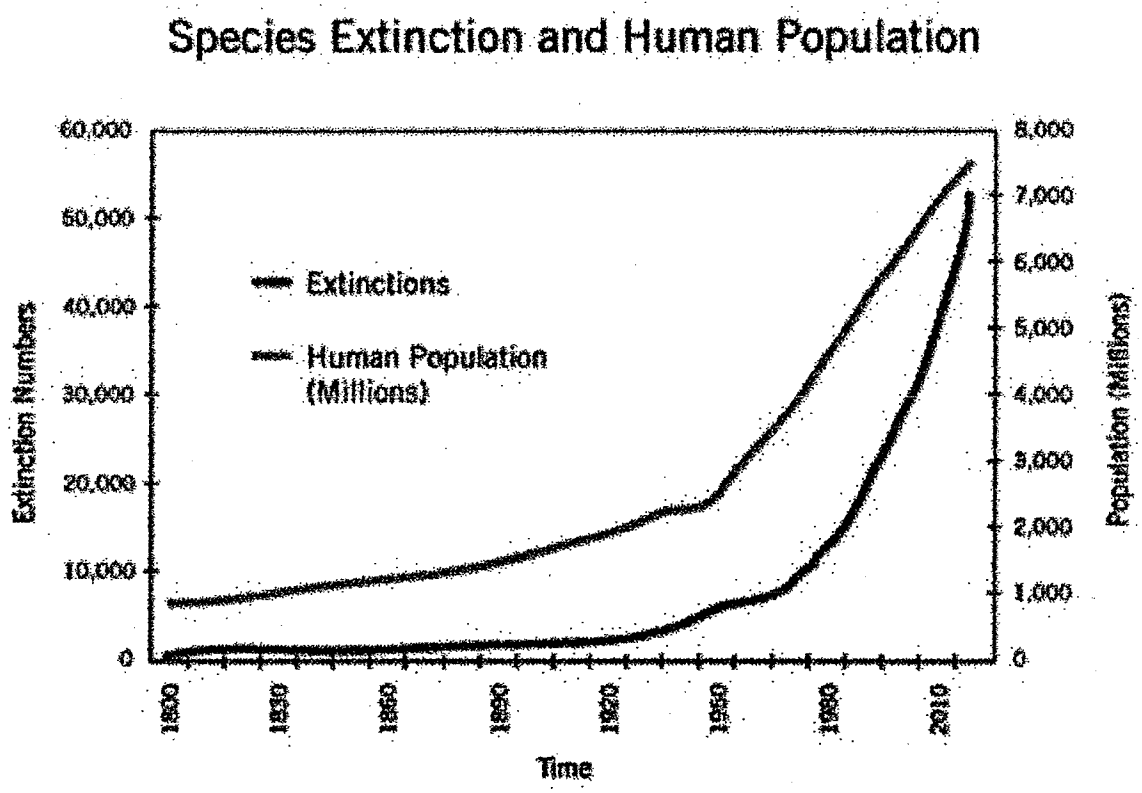
Directions: Create a graphic organizer to gather your ideas about cloning as it pertains to the *Depths of Complexity – Trends.*

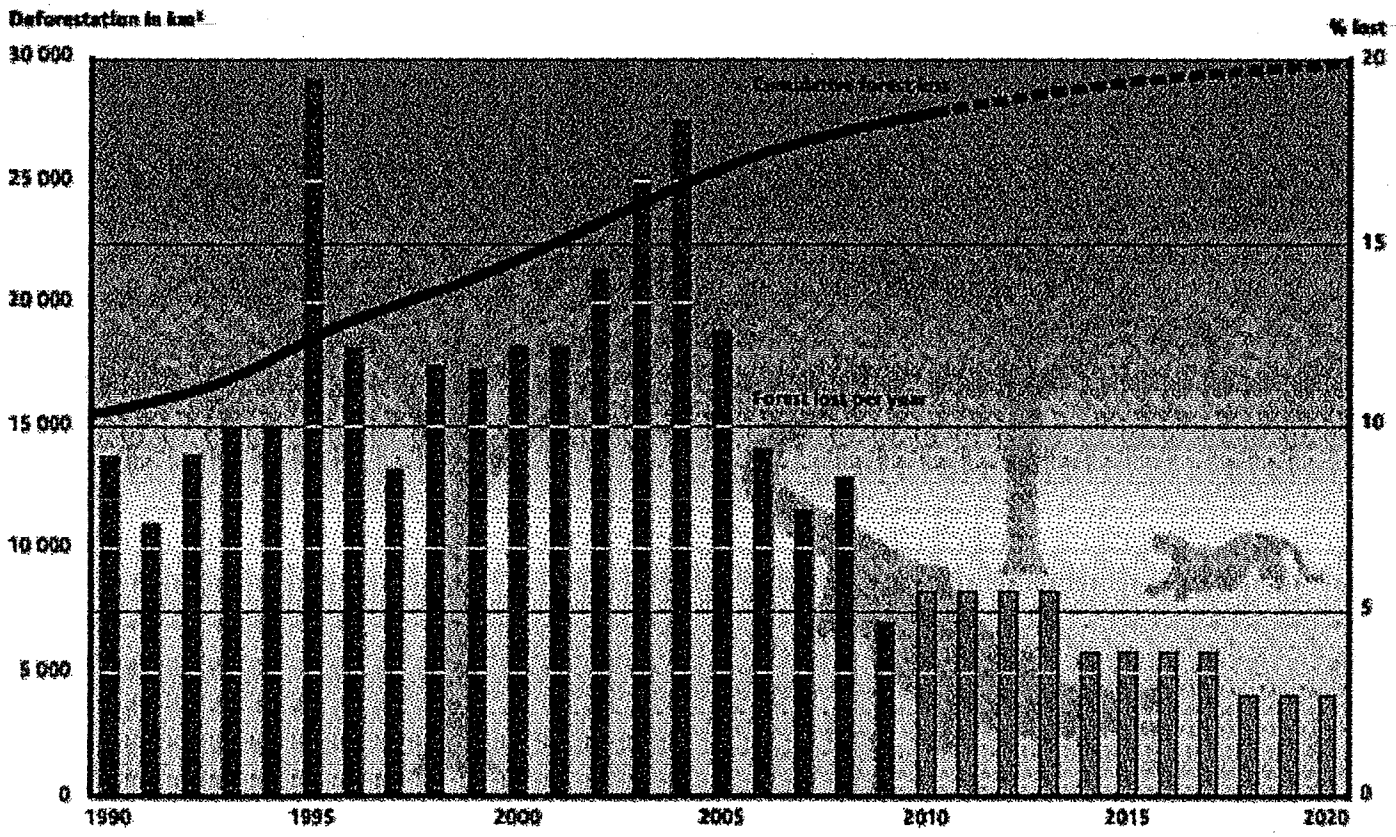
GATE Icon – Trends



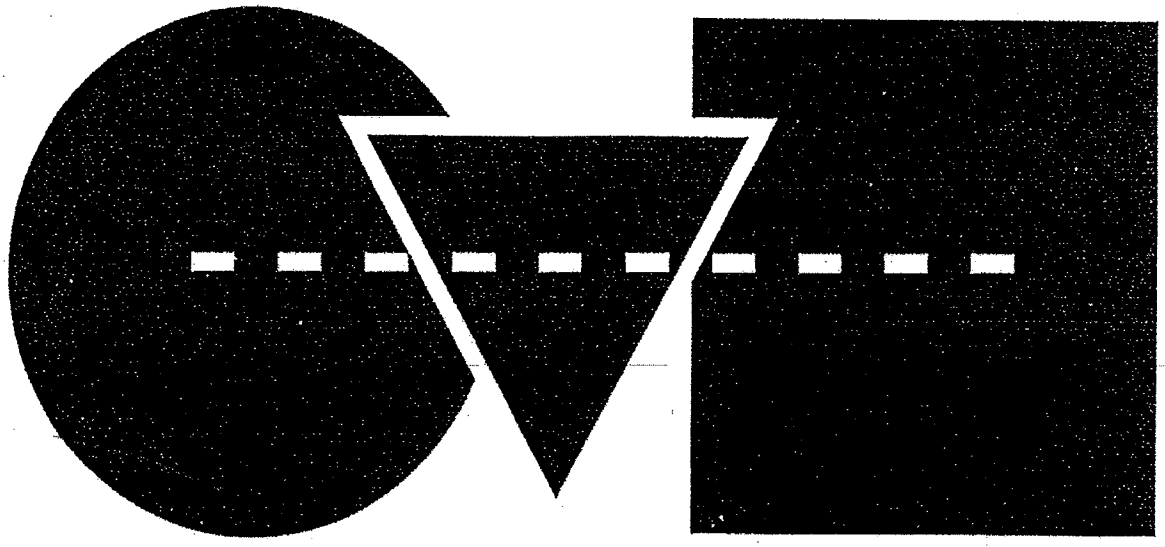



GATE Icon - Trends

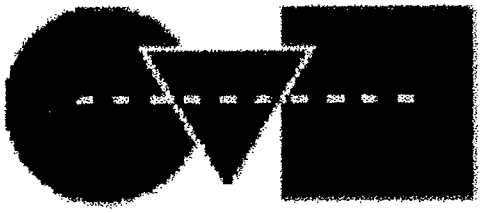


# Across the Disciplines



* What common theme connects the topics?
* How is one topic like the other?



NAME_____

# Across the Disciplines

**Key Questions**

- What common theme connects the topics?
- How is one topic like another?
- How does it help you understand other subjects, jobs, fields of study, etc.

Directions: Take notes to gather your ideas about cloning as it pertains to the *Depths of Complexity – Across the Disciplines.*